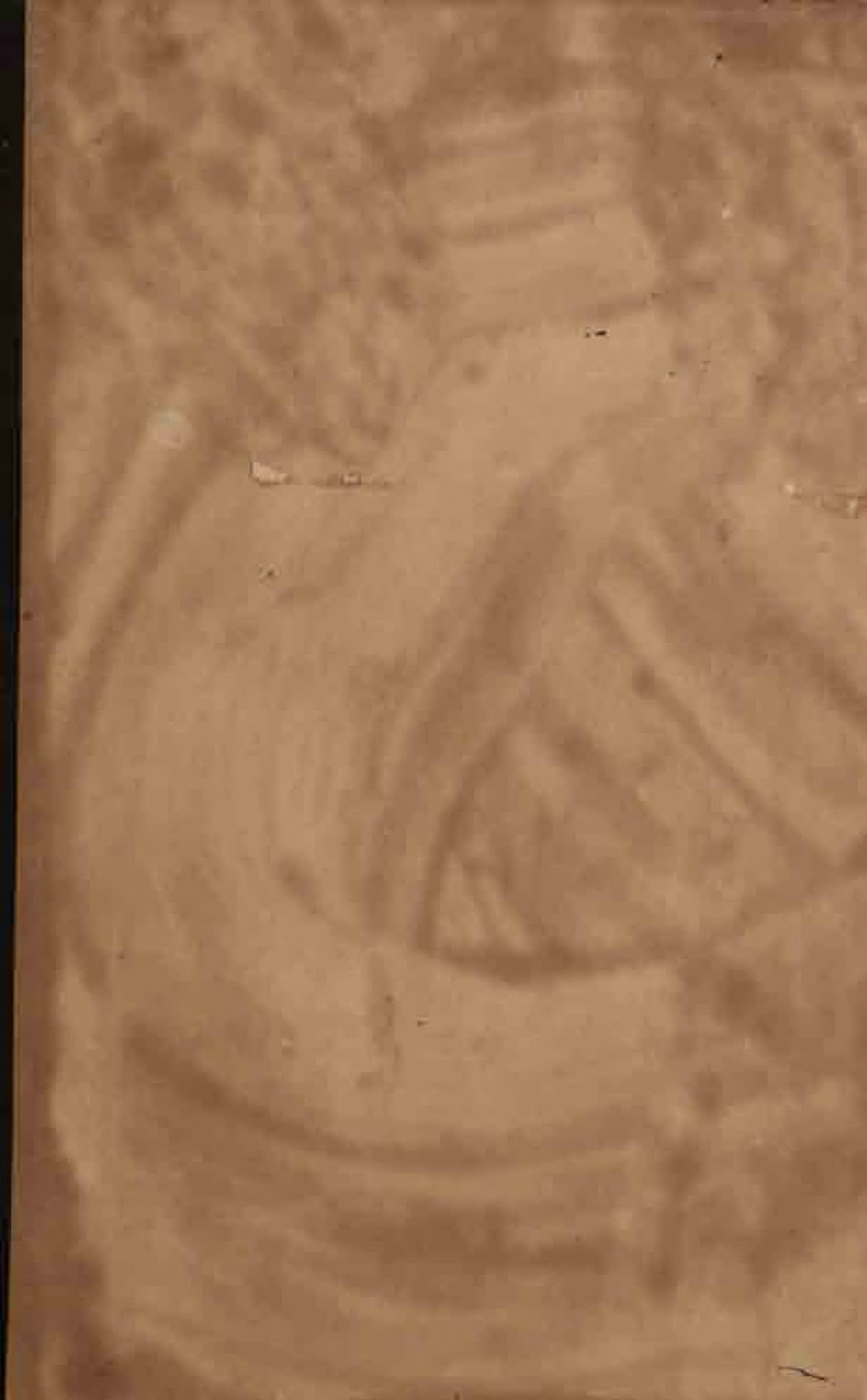


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VOL. 1

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NO. 1

UNIVERSITY OF PENNSYLVANIA THE MUSEUM JOURNAL



ETRUSCAN GARGOYLE FROM THE TEMPLE OF FORTUNE.
AT PRÆNESTE

PUBLISHED QUARTERLY BY THE
UNIVERSITY MUSEUM

A NEW DEPARTURE.

IT is hoped that this first number of the MUSEUM JOURNAL will meet with a favorable reception on the part of the members, and of readers generally. It will be followed by other numbers at intervals of three months, with added features calculated to meet more fully the demands of all who take an interest in Museum matters. The first and chief object of the JOURNAL is to convey to the members an accurate account of what the Museum is doing and to keep them in touch with its activities. The need for such a medium of communication, felt in the past, has of late been clearly indicated by a general demand for authoritative information along those lines of activity to which public attention has already been directed or upon the less advertised labors, which together justify our claims upon public attention. Such information, in order to reach the many, without prejudice to the few whose inclinations and opportunities have led them into the channels of special knowledge, must be presented without too many technical particulars. Accuracy of outline must take the place of abundance of detail. The Museum is an educational institution of wide connections. Its several larger series of publications, dealing with subjects of research and containing detailed results of investigations, are intelligible and interesting to the specialist but unprofitable to the public. On the other hand the public generally has the deeper interest in the Museum since it is erected for their benefit, while the members of the Museum and all who contribute to its support have a peculiar interest in its operations and naturally desire to know what is being done. It has been thought that a quarterly journal would give the most efficient means of meeting these several needs.

The scope and purpose of the JOURNAL

make it a standard publication of merit, containing much information regarding exploration and kindred topics which cannot be had elsewhere. In addition to the regular review, it will contain short articles upon objects of special interest in the Museum. It will relate the history of expeditions in the field and give descriptions of all new acquisitions. It will form a magazine of valuable and entertaining matter appropriate to any library or reading room.

GROWTH OF THE MUSEUM.

In 1889 the University Museum was founded and the collections acquired at that time were installed in the Library building. In 1898 the fine new building designed by Cope & Stewardson, Frank Miles Day and Wilson Eyre was erected. The architects' plan contemplate a beautiful and imposing edifice worthy of the object to which it is to be devoted, a noble adjunct to the University and a superb feature of the city. Situated on the west bank of the Schuylkill, it is designed, when complete with its great towering dome and graceful walls, to command the entire Schuylkill embankment of the future.

The ground for this great edifice has been made over by the city to the University, and the building erected in 1898, and now known as the University Museum, constitutes about one-fifth of the entire plan. In the meantime the growth of the collections has been so rapid that the present building is inadequate to hold them, and the time has come when an appeal must be made to the citizens of Philadelphia for the means of erecting the remainder of the building according to the architects' plans. The exhibition rooms are becoming overcrowded, the storage rooms are full, and valuable collections which would surely come to us

if we had this monumental building in which to house them, are in danger of going to other cities. The ends that are to be served are such that no one can be indifferent to the project. No better object of private benefaction could be conceived than this great Museum dedicated to Man and his works, aiming to reconstruct his thoughts and to unfold his visions in the past, and by the work of his own hands giving permanent form to these thoughts and substance to these visions.

As it gathers within its walls the harvest of cultures that men once gloried in, the Museum becomes a center for the spread of a higher culture in the present and in the future for all time.

Not less urgent than the need for a building is the call for an endowment. The generosity of those who have heretofore from year to year contributed to the maintenance of the Museum has been taxed more and more heavily as the expansion of the institution brought its inevitable increase in the budget. The present endowment is very small, and the annual deficit has to be met each year by voluntary contributions. In order to put the operation of the Museum on a sure basis an appeal must now be made for an endowment which will give an annual income of seventy-five thousand dollars. The Museum will then be in a position to hold its own and sustain without embarrassment the labors to which it is committed and the reputation to which it is entitled.

The collections that are assembled here have all been acquired through individuals and without assistance from the city or from the state or from any public moneys whatsoever. They represent the gifts of persons interested in the objects of the Museum and an expenditure of private fortune which, if computed at the present time, would come to a very large sum.

Like all the other notable collections in America these have been built up under the influence of that characteristic attribute of the American people, their capacity for giving money for great objects, that has raised the American universities to the high level which they occupy and that makes the University of Pennsylvania in particular the famous seat of learning that it is. In view of this striking example and of the examples set by other great cities it is surely not without reason that we believe that means will be found to provide the money needed now so urgently for the building of the Museum and for an endowment that will enable it to fulfil its destined service to the community and to mankind.

REORGANIZATION.

When the collections were exhibited in the Library building the office of Director was filled by Mr. Stewart Culin, but with the opening of the new building in 1899 this office was abolished, and from that time till the present year the Museum has been without a Director, each Curator reporting to the Board of Managers and conducting independently the affairs of his section. At the January meeting of the Board of Managers the office of Director was created anew and the new order took effect on February 1st. The reorganization of the entire Museum on the basis of a responsible head has accordingly been undertaken and the Director has been engaged since his appointment in effecting those changes and adjustments which correspond to the new condition of things, and in introducing those measures of control which are necessary to give effect to the resolution of the Board, and upon which the affairs of the Museum are now to be conducted. This result has not been fully brought about at once, but will be achieved as speedily as possible.

THE EGYPTIAN SECTION.

THE ECKLEY B. COXE JUNIOR EXPEDITION.

THE excavations of the ECKLEY B. COXE JUNIOR Expedition to Nubia were carried on during the winter and spring at two distinct sites, viz., Anibeh and Halfa. At the former place Mr. C. Leonard Woolley cleared and planned a remarkable castle and part of a town built by the people whose graves provided us two years ago with the rich collection of Meroitic inscriptions and Romano-Nubian objects which occupy a large part of the Egyptian gallery in the Museum. The castle, which is built of brick and rises to a height of four stories above the ground, was built between 100 and 500 A. D., and much resembles a mediæval European fortress. It was constructed by the Blémyes, a barbarian people living just beyond the borders of the Roman province of Egypt, and is of great interest. In the same district several dozen tombs of the twentieth dynasty were opened, from which were obtained beautiful small cabinet specimens, principally of layettes, some of which are of quite new character.

The digging at Halfa, conducted by the Director of the Expedition, was in regular continuance of the work of 1909 and was executed on a very large scale. The whole area between and around the two temples of Behen was completely cleared to the original ground level, which is at an average depth of ten feet below the present desert surface. It was found that the whole area was covered with dwellings, belonging principally to the priests and officers of the temples. These have been left open for visitors to view, and the tourist who lands at Behen will now descend as at Herculaneum by a staircase which will take him from the floor level of 1910 A. D. to that of 2000 B. C. Four distinct strata of occupation are visible,

the lowest being that of the twelfth dynasty, the other three of the eighteenth dynasty. Above this latter the section shows in places clearly preserved the floors of a Roman-Nubian dwelling.

The excavations enabled us to trace the complete history of both temples, which underwent several restorations and rebuildings. The antiquities obtained include three fine statuettes, one of which, representing a seated scribe named Amenemhat, will rank among the best specimens of Egyptian statuary brought to this country, some fine painted stone jars of new varieties, a door inscribed with the name of King Aahmes, founder of the eighteenth dynasty, and some inscribed stelæ.

D. R. M.

BABYLONIAN SECTION.

AN ANCIENT PLOW.

AN exceedingly interesting seal impression depicting a plow, drawn by two oxen, is found on a clay tablet with a cuneiform inscription in the University Museum. This tablet belongs to the Cassite period of Babylonian history, and is dated in the fourth year of the reign of Nuzi-Marattash, who lived in the fourteenth century before Christ. The seal used to make the impression must have been an unusually large one, for it measured about two and one-eighth inches in length. After the surface of the soft clay tablet had been covered with writing this seal, which was of the usual cylindrical form, was run like a roller over the inscription on both sides and the four edges of the tablet, which measure about $2\frac{3}{4} \times 4\frac{1}{2}$ inches. That is, the entire document was covered with the impressions of different parts of this large seal. Unfortunately, there is no complete impression of the seal on the tablet. Some of the parts were repeated a number of times,

but other parts seem to be entirely wanting. Moreover, the surface of a portion of the tablet has suffered considerably, due probably to the moisture in the earth, or exposure to the atmosphere after the tablet had been excavated. The accompanying drawing of the seal impression (Fig. 1) was made after a careful study of the different traces found on the various parts of the tablet by Mr. Hermann Faber, Miss Baker and the writer.

"ox," in the inscription, are in use in Babylonia at the present time. It is the Zebu or humped bull (*bos indicus*).

The individual for whom the seal was cut regarded himself as a devotee of Nin-Sar, the god of vegetation, as the first line of the inscription shows (Arad-NIN-SAR). Unfortunately the name of the owner in the second line is so imperfectly preserved that it cannot be read.

For some time other representations of

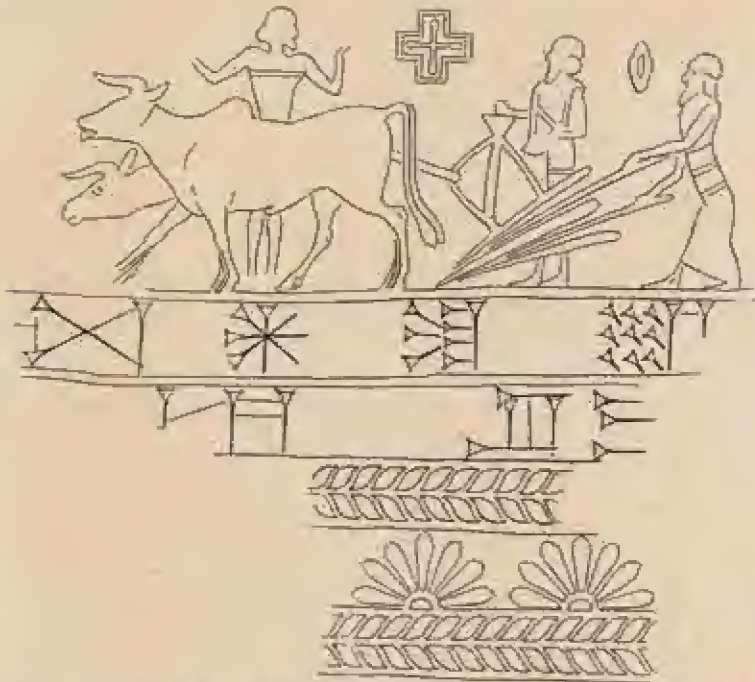


Fig. 1—Gang of men plowing and sowing. From a Babylonian Seal Impression. 14th Century B. C.

The plow gang consists of three men. The one depicted larger in size than the others is doubtless the chief. He appears to be driving the animals, as is indicated by his raised arm, perhaps holding a whip. Another, having a bag over his shoulder, is in the act of feeding the tube or grain drill, through which the seed was dropped into the furrow made by the plow, which is being guided by the third man. The animals drawing the plow, known as *alpu*,

the plow in antiquity have been known, but in no instance is it so accurately represented as in this seal impression. A boundary stone of Meli-Shipak, of the Cassite period, recently found at Susa, contains the picture of a plow, which has hitherto been regarded as the earliest. It does not seem to have a tube. There is another picture of a plow found on an undated fragment belonging to the same period. Later representations of plows

with tubes are found on monuments of Sennacherib and Esarhaddon. Plows similar to the one found in this seal impression are in use in Syria at the present time. The plow on the Museum tablet, here discussed, is the earliest known, being about a century earlier than the one on the boundary stone belonging to the reign of Meli-Shipak.

piece of modern machinery does, in that it combined the processes of plowing and sowing.

A. T. C.

A VASE OF XERXES.

As early as 1762 Count Caylus published an account of a marble vase in the *Cabinet des Médailles de Bibliothèque Na-*



Fig. 2—Alabaster Vase of Xerxes the Great.

It is also interesting to note that one of the latest inventions of our Western civilization whereby the grain is sown by machinery was already anticipated by ancient Babylonians at least thirty-three centuries ago. In fact the simple Babylonian device accomplished what no single

tional, at Paris, inscribed with cuneiform and hieroglyphic characters. But at that time it was not possible to read the inscription.

After some progress has been made in the decipherment of the cuneiform script, through the important investigations made

by Grotefend, Abbé Saint-Martin, who had devoted considerable time in studying his results, felt that he was able to read the name of the king inscribed on the vase. Champollion, after he had found the key to the Egyptian hieroglyphics, suggested to the Abbé that they decipher the inscription independently. The test proved conclusively that progress had been made in the decipherment of the cuneiform and the Egyptian hieroglyphs and that their methods were correct, for their results confirmed each other's progress. It was found that the inscription read: "Xerxes, the Great King." It was, however, only determined in later years that the three different cuneiform inscriptions found on the vase represented the Persian, Elamitic and Babylonian forms of writing.

A number of similar vases and fragments belonging to the same king have since made their appearance. Loftus, in 1853, found several fragments of a similar vase in the ruins of Susa. These were deposited in the British Museum. Newton, in his excavations of the mausoleum of Halicarnassus, an ancient Greek city of Asia Minor, discovered in 1856 another vase of the same king, which found its way to the British Museum. Less important fragments were also discovered by Dieulafoy at Susa, which are now in the Louvre.

Through the instrumentality of the late F. W. Clark, Esq., of Philadelphia, a similar alabaster vase, with the same quadrilingual inscription, was purchased in 1888 from Joseph Shemtob, an antiquity dealer in London. The provenience of this vase is unknown. It measures nine and seven-eighths inches in height and eight and fifteen-sixteenths inches in width. It is now in the possession of the University Museum, and is on exhibition among its treasures (Fig. 2).

The upper line of cuneiform writing shows the Persian script; the second line

is in Elamitic; the third is in Babylonian, and the vertical column underneath gives the same inscription in Egyptian hieroglyphics, XERXES, THE GREAT KING.

A. T. C.

MEDITERRANEAN SECTION.

MR. SEAGER IN CRETE.

MR. RICHARD B. SEAGER continued his excavations in Crete during the late winter and spring and has been successful in locating the cemetery of Gourou, the Mycenaean town cleared by Mrs. Harriet Boyd Hawes in 1904. The excavation of this cemetery has occupied Mr. Seager during the season just closed. It dates mainly from the third Middle Minoan period (2500-1800 B. C.) and the first Late Minoan (1800-1600 B. C.). The bodies were placed in large terra cotta jars, of which more than 150 were exhumed. The bones were very well preserved, and hence from the standpoint of physical anthropology this is one of the most important excavations ever made in Crete, since the skulls found at other sites are few and in bad condition. Some of the jars are painted, but the style of decoration cannot yet be described, since they have not been cleaned and examined. These are the first burials dating from the first Late Minoan period that have come to light in Crete, and Mr. Seager's discovery is therefore of special interest to students of Cretan archaeology.

G. B. G.

CASTS FROM THE ARCH OF TRAJAN AT BENEVENTUM.

Among the objects which first attract the attention on entering the Mediterranean Section of the Museum are the casts from the Arch of Trajan at Beneventum. The original was erected in the year 114 A. D. by the Senate and People

of Rome to commemorate Trajan's beneficent rule, while the Emperor was absent on a campaign in the East; but Trajan died abroad in 116, without having seen

peror in it. It is one of the best preserved of Roman triumphal arches.

The casts in the Museum reproduce the most interesting and best preserved of the



Fig. 3—Relief on the Arch of Trajan at Beneventum. *Liber, Diana and Sylvanus.*

the monument. It is fifty feet high, covered with reliefs relating to the life of Trajan, while on top once stood a four-horse chariot with a statue of the Em-

sculptures, but as they are taken from different sides of the monument, it has obviously been impossible to give them in the Museum, positions corresponding to

those which they have at Beneventum. On the east wall are two slabs. The upper is taken from the keystone of the vault and represents victory crowning Trajan, the lower comes from the left side of the

represented on the missing portion of the relief (Fig. 3).

Above the doorway on the south wall is the upper part of the side facing away from Rome. In the upper corners are



Fig. 4—Relief on the Arch of Trajan at Beneventum. Jupiter, accompanied by Juno and Minerva.

attic or upper part of the arch on the side facing away from Rome and shows Liber, Libera, Deana and Silvanus as protectors of the province of Dacia. They were probably welcoming Trajan, who was

draped river gods: in the middle is a draped female figure, while below are nude boys representing the Seasons. Below on the left is a procession of soldiers with prisoners and booty, and on the right a

similar procession. Below these are two large slabs. That at the left (Fig. 4) is taken from the attic of the side of the attic of the side facing Rome. On it is represented Trajan, accompanied by Hadrian and followed by lictors in the



Fig. 5—Relief on the Arch of Trajan at Beneventum. Trajan accompanied by Hadrian received by Rome.

arch facing Rome and shows the Capitoline gods. Jupiter stands in the middle with Juno at the right and Minerva at the left. The slab at the right of the doorway (Fig. 5) is also taken from the

act of being received by Rome together with two consuls and penates.

On the south wall of the Museum within the doorway are three slabs taken from the left pylon of the side of the arch fac-

ing the country. At the top Mars presents to Trajan a recruit accompanied by a centurion. Below this are two Victories slaying a bull. On the lowest slab Trajan in the presence of Jupiter Feretrius receives the oath of fealty from the Germans.

from Trajan. Above Euphrates is a bridge by which the Romans are crossing.

This series of casts gives an excellent idea of historical relief sculpture, the only form of sculpture which can really be called Roman.

W. N. B.



Fig. 6—Mesopotamia seeks mercy from Hadrian.

On the west wall are two slabs. On the upper two armed male figures stand on either side of two boys who were employed in sacrificial rites. Below (Fig. 6), Mesopotamia personified kneels between her two rivers and begs for mercy

AMERICAN SECTION.

THE HEYE COLLECTION.

THE GEORGE G. HEYE collection illustrating the culture of the American Indians has been materially enlarged since its first opening in February

last. Among other things a fine carved wooden bowl from the Sauk and Fox Indians, a sun robe, and a collection of pipes from the Northwest Coast have attracted special attention. At the present time Mr. Heye is maintaining three expeditions in the field, one among the plains Indians, another among the Ojibways and still another in Ecuador. No reports

will be enumerated and described in a later issue.

PENOBSCOT BIRCH BARK CANOE.

Mr. John L. Hammer has presented to the Museum a birch bark canoe made by the Penobscot Indians in Maine. The canoe, which is in a perfect state of preservation, is made from a single piece of



Fig. 7.—A Hall in the American Section of the Museum. Showing the George G. Heye Collection.

have yet been received from the last. The first has had very remarkable success, obtaining rare specimens, such as sacred medicine bundles and objects used in the ceremonies. From Dr. Eastman, who is in charge of the work among the Ojibways, there have just been received two very fine birch bark canoes and a collection of very remarkable specimens, which

bark without a break or a defect in any part. This is rather remarkable considering that the canoe is twenty feet in length. It is a fine example of the Eastern Algonquian art of canoe building, which has so long served as the white man's model in his construction of canoes. The lines of this specimen are beautiful, and the way in which it is built gives a fine idea of

the ingenuity and skill of the Indian craftsman.

G. B. G.

AN APACHE BASKET JAR.

One ordinarily thinks of the Apache as cruel and unprincipled marauders without either time or inclination, until recent years, for the cultivation of the purely

with no other help than an owl and her own deft fingers, works patiently at her basket. The result is often an object of surpassing beauty of form and decoration, of such even finish of technique as to elicit wonder that unaided eye and hand could plan and execute so faultlessly. The Apache are now gathered into several



FIG. 8.—An Apache Basket-Jar.

artistic impulse. Old Geronimo, the implacable foe of the United States Government, is the ideal of the lay conception of the Apache. And yet few Indian tribes, if we except certain tribes of California, do finer work than the Apache in that most characteristic of all Indian art forms, basketry. Day by day the Apache woman,

reservations, the Jicarilla and Mescalero bands in New Mexico, the various bands grouped together as White Mountain and San Carlos Apache in Arizona. The New Mexico and Arizona bands differ considerably in their basketry, as in many other respects, that of the latter being considered of finer grade.

The urn or jar-shaped basket here illustrated (Fig. 8) is a product of the Arizona Apache. It is perhaps the most striking single piece in a hall of the Museum crowded with interesting and beautiful specimens of Indian handicraft. It attracts partly by its unwonted size (it measures very nearly $3\frac{1}{2}$ feet in height, 17 inches in diameter of the mouth), but largely also because of its elaborate decoration and beauty of outline. It is doubtless one of the largest examples, if not the largest example, of Indian basketry exhibited in our ethnological museums, and is said to have consumed two years in the making. Whether or not this statement is strictly correct, it is obvious that even the most experienced basket maker would require an unusual length of time for the perfecting of such work. It is in fact an idealized form of the smaller and less profusely decorated flat-bottomed basket jar used by the Apache for storage purposes. In regard to technique, materials, method of applying and character of decoration, however, it does not present unusual features. In regard to technique, it is from beginning to end an example of the coiled variety of Indian basketry; in other words, it is built up not so much by a process of weaving as of sewing. Firmness is given the basket by an ascending spiral of two slender but stiff rods of willow, which are added as required: to employ the terminology now in vogue, we have here a coiled technique with two-rod foundation. Around this wood core is wrapped the sewing material, peeled and scraped splints of willow or similar wood for the white areas, splints of the naturally black "devil's claw" (*Martynia lanisiana*) for the black, these two materials relieving each other according to the requirements of the decoration: in Apache basketry designs are always brought out in black on a white background. Each winding of the sewing material not only in-

cludes the two rods of its own coil, but is caught under one of the two rods of the row or coil beneath, this method of "hitching" giving the fabric greater strength than if the wrapping were merely caught under the wrapped strands of the next lower coil, a technique, incidentally, which is characteristic of the Mescalero Apache. The direction of coiling, as one looks into the basket, is clockwise, the coiling continuing without variation to the very last stitch of the rim. The Pima, neighbors of the Apache, on the other hand, regularly finish off with a braided rim. It will thus be seen that the nature of the coiled technique leads to a spirally corrugated surface, the surface units being narrow and relatively high stitches of varying color. Evidently all designs must consist of vertical and horizontal rows of stitches, so that the style of art here illustrated is primarily geometrical in character. And, indeed, most of the characteristic motives in Apache as in other Indian basketry art, are purely geometric; this is seen particularly in the beautiful round bowl-like trays, also of coiled ware, exhibited together with the jar. Realistic or semi-realistic representations of human beings and animals are often introduced as designs into the jars of the Apache, a great deal of geometric conventionalization necessarily taking place. Thus, the wagging tails of the animals here represented are nothing but two short rows of black stitches diagonally disposed, while the five fingers of the men are simply that number of black stitches in a row, each being kept apart from its neighbor by a white stitch.

The main body of the basket is decorated with fifteen concentric bands, consisting in part of geometric, in part of mingled geometric and realistic motives. This arrangement of the decorative field into concentric bands is a more or less pronounced characteristic of Apache

basket art, and will be found further illustrated in the trays already referred to. The first band, starting from the bottom, consists of a series of terraced figures with inverted bases, and is only partly visible in the photograph. The second band is composed of a series of alternating crosses and quadrupeds, presumably dogs; the third band is a simple checkered pattern bounded, above and below, by black coils. It will be observed, by a reference in the figure to the upper left hand part of this last band, that the bounding coil ends a stitch higher than it starts; in other words, true circles are impossible in the coiled technique, and must be replaced by rounds of a spiral. Alternating man and vertically disposed diamond and cross make up the fourth band, followed in the fifth by a second area of checkerwork; the sixth band is made up of a series of alternating man and dog with superimposed cross, the seventh of a third checkered field, and the eighth of a second series of inverted terraces. The ninth band is practically the center of the decorative field and has the most elaborate designs of all; man, cross, followed by a three-pronged figure (possibly a rain symbol), and deer or dog (the deer are arranged in two groups of four each, the dogs in one of three and one of two), are the design elements in the order given. A fourth area of checker work, without the lower bounding coil in black noted before, forms the tenth band; the eleventh band is another series of inverted terraces; this time in black and white instead of solid black. A series of dogs forms the twelfth, a fifth field of checkerwork the thirteenth, still another series of inverted terraces the fourteenth, and a series of alternating man and dog, the men being connected by horizontal lines, the fifteenth or neck band, followed by a finishing coil in black. The six bands of checker work

may be looked upon as marking off six decorative fields.

A curious point comes out on a careful study of the ninth band, illustrating the difficulties the basket maker encounters in mapping out, in her mind's eye, the size and recurrence of elements in a restricted field. Ordinarily the cross is followed by the three-pronged figure, yet once out of the thirteen times that the group occurs, the reverse order is followed. An examination of the actual specimen, for the photograph fails us here, will convince the visitor that this is not due to mere forgetfulness on the part of the maker. To follow the usual order would have brought the elements into conflict with the adjoining man and deer; in other words, an inaccurate mapping out, at the start, of the decorative field left too little space at the end for the proper carrying out of the initial idea.

E. S.

TWO PAIUTE MYTHS.

THE two stories that follow are selected from a series of Paiute myths recently obtained from Tony Tillohash, a young Paiute Indian from the southwestern part of Utah, a typically semi-arid section of our country characterized, among other things, by the washes or arroyos that are incidentally referred to in the first of these myths. All the myths obtained from Tony were dictated to the writer in the form of Paiute Indian text, and it is intended, as soon as time and opportunity will allow, to publish the whole body of myth in text and carefully worked out translation as one of the series of anthropological publications of the University Museum. The translation of the two myths here offered as preliminary specimens of Paiute mythology, while not rigidly literal, is sufficiently so to preserve both the exact content and spirit of the Indian original.

The characters in these myths, as in Indian mythology generally, are beasts and birds; not mere speaking animals in the manner of an *Æsopian fable*, but supernaturally endowed human beings who lived on earth before the coming of men and who were later transformed into their present shape. The human and animal characteristics of these beings interplay constantly in the mythology. Needless to say, the older Indians, particularly such as have been but little affected by contact with the ideas of the whites, believe firmly in the truth of these myths. Such figures as Sparrow Hawk and Gray Hawk are not to them the mere idle fancies of an hour of story-telling, but the mythologic prototypes of still powerful beings, beings whose supernatural aid the medicine-man strives to obtain. Characteristic of *Palute* mythology in particular is the prominence of song as an element of myth-telling; some of the characters, indeed, regularly sing their parts. A considerable number of such myth songs were taken down on the phonograph and will be incorporated with the myths to which they belong when these are offered to the public.

THE STRATAGEM OF WOOD RAT.

At that place dwelt Wood Rat, and once to the Deer and Mountain Sheep people he said, "Ho there! do you all come to my place and have a round dance!" said he. "What is it that Wood Rat says?" said the Deer and also the Mountain Sheep. "To my place do you all come and have a dance? that is what he says," said some. And so at his place they had a round dance. Those Deer and Mountain Sheep danced the round dance while that Wood Rat and two from among the Deer and Mountain Sheep, one from each, sat together at the side of the round dance that was taking place and

talked with one another as men are wont to do in council.

One young Mountain Sheep was the first to sing for the dance, and in this wise he sang,

Moving through the sand-wash he goes,
Kicking up his knees,²

sang along thus up to nearly in the middle of the night. Then one young Deer sang for the dance after him, and that one sang in this wise,

Visible are the summer footprints, foot-
prints, footprints,³

sang along thus up to the break of day. And then that Wood Rat went right into the round-dancing line and joined hands with the Deer and the Mountain Sheep buck who had been singing. In this wise sang he as he stood moving along between the two of them,

When indeed I say it, you will close your
eyes, you will close your eyes,

and they all closed their eyes. Then both of them through the neck just above the collar bone he stabbed with his knife, and having treated them thus, he began to weep. "Oh! what has happened to them?" said Wood Rat, and then he said, "Ho there! do you all go and return again into that land which you own. And then at the setting yonder of the sun I shall burn them on a pyre." "It is well," said those Deer and Mountain Sheep, and they arrived into their own land. But Wood Rat cut up the two at that place and what leaves and branches he had butchered them on he set afire. And the Deer and Mountain Sheep, seeing the blaze from afar, said, "In that way it will be, he did

²This refers to the peculiar walk of the mountain sheep.

³This refers to the footprints of the deer during the hunting season.

indeed say, Surely it starts a-burning at his house." But Wood Rat cut up the meat into thin slices in order that he might preserve it for food.

As he had first spoken, so did Wood Rat continue to speak from time to time, and every time he commanded a round dance to take place. Now those Deer and Mountain Sheep did say, "For what reason does he always say, 'You shall have your eyes closed as you dance,' in such words speaking?" And one time again he announced in a loud voice that they should come together for a round dance. "Oh!" said they, "let us all go and have a round dance at his place, as he says." And in very deed they had the round dance at that place.

Now one young Mountain Sheep, as was their wont, did sing.

Moving through the sand-wash he goes,
kicking up his knees,

and as those before him had done, so did he, sang for the dance up to nearly in the middle of the night. And then one young Deer did also sing for the dance, and as those before him had sung, so sang he,

Visible are the snower footprints, foot-
prints, footprints,

Then that Wood Rat sang for the dance as in times before then he had done. One of the Deer bucks together with a Mountain Sheep buck stood on either side of him as they danced along. As in times before then he started in to sing along,

When indeed I say it, you will close
your eyes, you will close your eyes,

but this time a young Mountain Sheep barely peeped out from behind his nearly closed eyelids as he danced along. "He is about to stab the two of you!" he ex-

claimed just as Wood Rat was indeed about to stab them. Wood Rat ran off in haste and scampered down under a rock. The Mountain Sheep buck struck at it with his horns, and as soon as he had done so, the rock was shattered to pieces. As far as hero, perhaps, does the story go.

THE CONTENTION OF SPARROW HAWK AND GRAY HAWK.

At that place were people once camping for the hunting of jack-rabbits. Now a certain one among them gave his wife a beating, whereupon that woman ran off towards the mountains. Therein was Gray Hawk dwelling up on a snow-covered peak and with him was his mother. When that Gray Hawk went off in yonder direction, then there in the midst of the mountains did he find the woman and home to his house he returned with her.

Now those who were camping for the hunting of jack-rabbits began to miss the woman and they called upon the white-breasted one^a that he might find her. And starting from the edge of the land he flew about looking everywhere but on the mountain peak, which still was left. As soon as it commenced to be evening, he returned and arrived where they were camping for the hunting of jack-rabbits. "I have not seen her," he said, "but still that snow-covered peak is left," said the white-breasted one. Early in the morning he went off to look over the snow-covered peak and on it he found the woman, found that Gray Hawk was having her to wife. Back whence he came he returned, back to those camping for the hunting of jack-rabbits. "What say you all that you will do to him?" said he. "Not easily to be overcome is Gray Hawk, and with him it is that dwells that woman. What, then, think you all to do to him?" thus spoke that white-breasted one. Then some one

^aA white aquatic bird, something like a sea-gull.

said, "Let us call upon Sparrow Hawk!" "It is well," they said, and proceeded to call upon that Sparrow Hawk. To him they said, "Go now and lead the woman away from Gray Hawk. Thus after having done to her, for your wife you shall have her," said they who were camping for the hunting of jack-rabbits.

Then there in the doorway was Sparrow Hawk sitting and kept a-singing, "What say you all that you will do to that one, Gray Hawk? Not easily to be overcome is he, he who has great power. Will you slay him?" said he as he sat there in the doorway. Only his flesh it was that did so, singing as he sat, but that soul of his to yonder mountain peak departed and to his elder brother's came. Then upon arriving he took hold of the woman and said, "This woman here is mine, having been given to me for a wife. Do you, then, without saying anything, give her up to me." "I shall not give her to you, for mine she is, having been taken up by me," said Gray Hawk. "Do not say that, say I! Quickly let her go, for mine she is, having been given to me for a wife, that is what I say." "But mine she is, having been taken up by me. Why, then, shall I give her up to you?" "Without saying so, quickly let her go! Otherwise I shall slay you," said Sparrow Hawk. "It is well, in no case shall I let her go. I care not if you kill me," said Gray Hawk as he held her by her arm; that Sparrow Hawk was holding her by her other arm.

"It is well," said Gray Hawk. "If you are angered, in what way would the earth appear, say you?" Then said that Sparrow Hawk, "When I am angered, the earth would become filled with fog. And as for you?" "When I am angered, the mountains would all go up in dust, then all would be a level space," said that Gray Hawk. And then said Gray Hawk to his mother, "Should I be killed, all my body you shall boil." Then one of the woman's

arms he wrenched off, and between them both they divided her body, each pulling her to himself. After they had done so, Sparrow Hawk slew Gray Hawk, and after he had gathered together all parts of the woman's body, all that had formed her body, he restored her to her former self.

Then the mother of Gray Hawk boiled him as he had told her to do. Then, when it dawned upon the earth, coming down from the sky was heard a noise of flapping wings, and on the rim of the bucket wherein he had been boiled he lit and sang thereon, "Sparrow Hawk I shall go and slay." And then his mother said, "Is it of a stranger that you speak, of one who is no kin of yours, seeing that you talk of going to kill?" "No, thus I say; but that one yonder slew me too," and towards the camp of the jack-rabbit hunters he flew. "Oh! Gray Hawk has come to do us ill," said those who were camping for the hunting of jack-rabbits, as they fled in haste, but that Sparrow Hawk just lay beside his wife and sang, as though nothing were happening. Gray Hawk swooped down upon him, thinking to hold him down, but in vain; whereupon that woman he took hold of. Both of them tried to tear her away from each other. Now Gray Hawk struck above him with his wing, but merely grazed his head. "Nearly, my elder brother, did you kill me," said Sparrow Hawk. And then their mothers led them away in different directions. "Do you act as though you were strangers to each other?" said the two old women, as they held on to their sons.

Did any of you hear something make a noise on the other side from here?"

EDWARD SAPIR.

Gray Hawk is considered Sparrow Hawk's elder brother.

This last sentence is addressed by the narrator of the story to his auditors. It is not to be literally construed, but is merely a conventional way of ending a myth by way of changing the subject. The auditors are expected to answer "No, I did not."

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THE SEAL RING OF A CITY OFFICIAL OF BEHEN.
TWICE NATURAL SIZE

PUBLISHED QUARTERLY BY THE
UNIVERSITY MUSEUM

EGYPTIAN SECTION.

THE ECKLEY B. COXE JUNIOR EXPEDITION.

THE first number of the MUSEUM JOURNAL contained a brief notice of the fourth ECKLEY B. COXE JUNIOR Expedition to Lower Nubia. In this number I propose to give some further details of that part of the work which was carried on near Halfa, while in the next number

as we know, by Queen Hatshepsut, which is familiar to all tourists who make the traditional excursion from Halfa to the Pulpit Rock and the Second Cataract. This temple was excavated by Captain H. G. Lyons some years ago, and a little north of it, though almost silted up with sand when we first saw it, is another temple of which first Rosellini and then Captain Lyons cleared what now proves to be only



Fig. 2.—Inner Fortification of the Town of Behen.

Mr. C. L. Woolley will describe his studies of the castle and town of Karanög, and his excavations of the twentieth dynasty tombs at Anibeh. In 1909 we selected as a promising site for exploration the place called by the ancient Egyptians Beben, which is on the west bank of the Nile about three miles south of Halfa. Almost the only visible monument of antiquity was the eighteenth dynasty temple built,

a small portion. All else was desert sand and waste with a few bricks cropping up here and there.

In 1909 we traced the principal lines of the ancient town and found that it had been enclosed by a remarkable series of walls making a circuit of about a mile, of which area again about half was protected by strong inner fortifications. The character of these walls may be seen from



Fig. 10—Temple of Amenhotep II Surrounded by Priests' Dwellings.



Fig. 11—Excavating the Temple of Amenhotep II at Behn.

Fig. 9, which shows the wall between Hatshepsut's temple and the northern temple, uncovered by us in these two seasons for a distance of over one hundred yards.

Immediately to the north of this great inner wall is the area shown in Fig. 10. The stone pillars mark the forecourt of the northern temple; and the space in

temples, in a sort of pit below the surrounding houses.

In the order of our work, however, photograph shown in Fig. 11 comes earlier than that shown in Fig. 10, for it shows the earlier stages of our digging as it appeared in February of this year after several weeks of labor. Only part of the



Fig. 12.—Butress in Fortification Wall, Marked with Letters to Show Levels.

front of that from left to right is occupied by priests' dwellings. These dwellings are raised each on the ruins of the last in four distinct levels, the highest floor being flush with the top of the pillars; so that the temple must have stood, just as ancient writers describe Egyptian

temple is yet visible, and in the foreground the trucks are running over a level higher than the tops of the walls shown in Fig. 10. It was a long and laborious task, for the depth of sand to be shifted and run out into the river or else on to the low lying desert was never less than

ten and sometimes fifteen feet. It may be useful to take the highest buttress seen in Fig. 9 as a scale. This buttress is shown more in detail in Fig. 12; it is seventeen feet high from its top to the level of its foundations. This scale then represents four very distinct historical periods. Beginning at the top there is three feet which was occupied by a building of the date of the Roman Empire (A). Next to this is three feet which corresponds to the twentieth, nineteenth and late eighteenth

some painted stone jars were found in them. But they are most interesting for the study of the domestic life. The hearths and granaries are in place, the grinding stones and the ovens, and we have left all the undecorated pottery lying exactly as its owners left it under the floors of the dwellings.

But the principal place of interest is of course the temple, of which a near view is given in Fig. 13. We found that neither Rosellini nor Lyons, though they had



Fig. 13—Temple of Amenhotep II.

dynasties (B). Below this is four feet representing the early eighteenth empire (C), and below this again is seven feet which corresponds to the twelfth dynasty. Except the topmost, that of the Roman Empire, these periods are represented by distinct and well marked floors over the whole area shown in Fig. 10.

The priests' dwellings, which extended on the far side of the northern temple as well, yielded few antiquities, though one or two inscribed stelae and some hand-

each the singular good fortune to find a piece of twelfth dynasty inscription, had gone below the topmost visible floor of the temple nor dug its outlying precincts. We have now cleared to its outside terminus wall and have gone down to the foundation inside and outside. The result of this has been to show that the building underwent many restorations and reconstructions. The temple in so far as it has been visible hitherto was entirely a New Empire temple, built, as we found

complete evidence in inscriptions to show, means the earliest temple. For in taking
 by Amenhotep II. It continued in use up piece by piece the floor of Amenhotep's
 during the nineteenth and twentieth building we found face downwards used



Fig. 14.—Doorway set up to King Ankhnes by Thori.

dynasties, and the cartouche of one of the as pavement a fine inscribed doorway
 last Ramessids appears in a stela carved which is one of the chief prizes of the year
 on the doorway. But this was not by any and is now in the Museum (Fig. 14).

It was set up by one Thuri, a notable of Behen, in honor of Aahmes, the first king of the eighteenth dynasty, a monarch whose records are extremely rare. The jambs are inscribed with the name and titles of the king and the tablet recording its setting up by Thuri; the architrave

even under and beyond the temple of Hatshepsut.

Of the twelfth dynasty we found no statues this year, though it will be remembered that in 1909, when digging the cemetery of that date, we found the statuette and all the jewelry of Karyn-



Fig. 15.—Statue of the Scribe Amenemhat.

shows the king and his queen Aah-hotep worshiping before Min and before the local hawk-god Horus of Behen.

Finally even below the temple of Aahmes was a series of perfectly aligned walls running at a wholly different angle of inclination to the eighteenth dynasty temples and extending far southwards,

miery. This year our prizes are all of the eighteenth dynasty. At the upper eighteenth dynasty level opposite the furthest buttress shown in Fig. 9 was discovered a cache of three statuettes. Probably they had been hung out of one of the temples where they had been set up together with commemorative tablets, of which remains

bearing the same names were found in digging the houses. The first is of a hard stone resembling diorite carved in flat relief without much detail, and bears the name of Aahmes, a scribe, named no doubt after the celebrated king. This statnette was allotted, in accordance with our contract, to Khar-tum. The second (Fig. 15), made in a similar stone, is a remarkably fine piece of statuary of a very rare type. It represents a scribe seated in the traditional attitude of the letter writer. His name and titles are written on his kilt, on the pedestal, and on his forearm. They inform us that he was named Amenemhat, that he was a scribe, a "king's friend" and "overseer of the king's workmen." The figure is unquestionably eighteenth dynasty by the style of the writing; and the place in which it was found agrees with the epigraphical evidence. Judged, however, on purely artistic grounds, it might well have been ascribed to an earlier date, and it is in every way a very remarkable specimen.

With this seated statnette, which is now in the Museum, was found a small figure of the same person, in steatite, beautifully inscribed. In this he is represented in the conventional attitude of the eighteenth dynasty, his knees swathed in a long robe which covers the arms up to the wrists. It is expected that the Sudan Government will allow this also to come to the Museum.

The remainder of the specimens brought from this site in the present season comprise several eighteenth dynasty stelae and some very handsome painted stone jars of the same date.

Of the twentieth dynasty, from tombs at Anibeh, we have obtained some beautiful cabinet specimens which will be described in a subsequent number of the JOURNAL.

D. RANDALL-MACIVER

BABYLONIAN SECTION.

THE PRONUNCIATION OF THE "INEFFABLE NAME" ACCORDING TO A JEWISH TEXT IN THE MUSEUM.

ONE of the mysteries of Biblical scholarship is the correct form and pronunciation of the name of the God of Israel. This name consists of four consonants which may be represented in English by the letters YHWH. But the vocalization of the word known to English readers, "Jehovah," is a fairly modern invention, arising in the middle ages,¹ in fact a philological monstrosity. The Jews themselves, according to their own tradition, had given up the public pronunciation of the word before the Christian era, and while there is evidence that the knowledge still survived in esoteric circles among the Jews,² the tradition of the pronunciation was at last utterly lost to them. They pointed the Tetragrammaton (i. e., YHWH) with vowel points, indicating that another word should be pronounced in its stead, and it is this other word "Lord" which in almost all the translations of the Bible, down to the more scientific attempts of modern times, represents the sacred name. In the King James Version it is spelled in capitals to distinguish it from the same word used as an epithet.

But a tradition of the pronunciation survived, as is so often the case with survivals, in certain unorthodox quarters. The Greek Fathers Theodoret and Epiphanius report that the Samaritans maintained the pronunciation as *'IaBe*, and the present writer has discovered in a Samaritan document of the beginning of

¹ See Moore in the Harper Memorial Volume, I, p. 145 ff.

² See Arnold, "The Divine Name," etc. *Journal of Biblical Literature*, XXIV, p. 152 ff.

the nineteenth century an Arabic transcription of the name which is to be pronounced *Yahwah*, or *Yahweh*.³ Similar forms are also found in early magical and gnostic papyri.⁴ On the basis of such traditions and on philological grounds there has arisen the modern scientific pronunciation *Yahweh* (generally, though erroneously in English, spelled *Jahweh*).

tainly represents the pronunciation of the Tetragrammaton. In the bowl in question (3997)⁵, there is read the adjuration that the evil spirits shall not appear to a certain man and his wife. The man's name in the Aramaic (the characters are the Jewish square script)⁶ is: *בריהביה* son of Mami; his wife's name is *Ispandarmed*, daughter of X (the



Fig. 16.—Hebrew Incantation Bowl showing the "ineffable name."

Engaged in deciphering the collection of "Jewish" incantation bowls in the Museum, I have come upon a text which for the first time in the Judaistic field cer-

mother's name is mutilated). I give these circumstances in order to indicate that we

³See *Jour. Bib. Lit.*, XXV, p. 49. In general see the writer's *Samaritans*, p. 213.

⁴Deissmann, *Bibelstudien*, p. 1 f. (Eng. tr. *Bible Studies*, p. 321).

⁵In the center of the field of the cut, l. 4 from the top.

⁶The Hebrew letters *he* and *chet* are represented by the same character in this script.

⁷In our illustration the letters of the name are reinforced in order to distinguish them from the rest of the text.

are dealing with actual personal names, not with arbitrary magical formulas.

Now the man's name which I have transcribed above in Hebrew characters is one that cannot be at once explained from Semitic or Iranian philology (most of the names in the bowls are Persian). The first four characters, however, are naturally read *berik*, Aramaic for "blessed." This suggests good Jewish names like Baruch (the Hebrew equivalent of the Aramaic form), Berechiah, etc. But the typical Jewish name (like ancient Semitic names in general) contains a divine element in composition. Berechiah = "BRK-Yahu (or Yah)", = "Yahu-has-blessed" (Yahu being an earlier form of YHWH, or its contraction); Baruk, or Berik, likewise = "Blessed-of-Yahu." We expect then after our first component "blessed" the divine name. Now the simplest reading of the five following characters (we must supply the vowels) gives *Yahbēh*; but *b* was probably soft and the transliteration might be more exactly represented by *Yahvēh*. This is the *Yahweh* or *Yahveh*, as it is also spelled, of modern critical science.

How came the exorcist to spell out this divine name occurring in the composition of a personal name? Certainly no Jew of the period (the bowls belong to the sixth or seventh century A. C.) pronounced that name, nor in any name-composition in the Old Testament is the Tetragrammaton used; it is represented by *Yeho-*, or *-Yahu-Yah*. My theory to explain the peculiar phenomenon is this: the name of the exorcist's client was Baruk, or Berik, or Berechiah (or the like). But in spelling the name the exorcist has by a *jeu d'esprit* spelled it out; he has expressed the pronunciation of the ineffable name because of its magical potency. As it were he confronts the devils with his happy etymology: you cannot touch this man, for his very name

is a talisman; I will pronounce that name for you, and when you hear it, you will tremble and flee. To be sure, only a mighty conjurer would dare to express the magical energy latent in an ordinary name. Now plays on names are most common in Semitic antiquity (cf. Jesus' play on *Peter* = "stone"), but in the present case the conjurer was giving the veritable etymology of the word.

Of course this was not orthodox.* Did the conjurer get his knowledge of the pronunciation of YHWH from an esoteric Jewish tradition? Or did it possibly come to him by way of Greek magic? This theory would explain the *b* as the third letter in the name—cf. *Ἰαβε*. However this may be, he knows enough to interpret correctly and practically a Jewish name which was charged with magic potency.

It may be added that in others of these texts† I had already discovered the same combination יְהוִיָּה in connections requiring that it should be understood as a divine name, and had already proposed that it was nothing else than *Yahweh*.

J. A. MONTGOMERY.

MEDITERRANEAN SECTION.

SCULPTURES FROM LAKE NEMI.

AMONG the marbles which have been presented to the Museum by Mrs. Lucy Wharton Drexel are a number from Lake Nemi. They vary much in artistic merit and all date from imperial Roman times, but some of them reproduce motives from the great period of Greek sculpture. One of the most interesting is a broken figure of Eros bending his bow (Fig. 17). The left leg is gone below the knee, the toes of the right foot, the right arm from the shoulders and the

*It is a question how far the epithet "Jewish" is to be applied to this bowl-magic.

†One bowl published by a German scholar contains it, but it has remained unrecognized.

left from below the waist are all missing, as is also the bow which may have been of some other material than marble. The face, too, was unfortunately destroyed and has been replaced in plaster.

century B. C. The *Eros* of Praxiteles was one of his most famous works as we know from the anecdote told by Pausanias. Praxiteles had promised to give Phryne the most beautiful of his sculp-



Fig. 17—Eros Bending His Bow.

Although this piece of sculpture dates from imperial Roman times the motive is Praxitelean, and it is not unlikely that the artist who carved it was inspired by the work of the great master of the fourth

century B. C. The *Eros* of Praxiteles was one of his most famous works as we know from the anecdote told by Pausanias. Praxiteles had promised to give Phryne the most beautiful of his sculp-

statues destroyed. The sculptor leaped from his seat saying that if his Eros and his Satyr were lost he had worked in vain. dedicated it in her native town of Thes-
plae. Like most good stories this is prob-
ably apocryphal and our statue, though



Fig. 18—Faun from Lake Nemi.

Then Phryne told him not to be alarmed, that nothing had happened, but that she had found out which was his most beautiful statue. She then chose the Eros and perhaps indirectly influenced by the famous Eros, is not, so far as we know, a copy of it. Another marble from Lake Nemi

worthy of note is a youthful faun with left leg advanced, leaning against a stump. He is nude and has resting over his left arm and behind his back a partially empty wine skin. About his head is a garland of pine needles and cones. The animal character of the faun is seen in the pointed ears and the slanting eyes, but the contrast with the realism of the Pergamene school as shown in the sleeping and drunken fauns from Herculaneum is striking. This statue may go back to a fourth century original.

W. N. BATES.

AMERICAN SECTION.

SOME USES OF BIRCH BARK BY OUR EASTERN INDIANS.

THE primitive Algonkian tribes of the northeastern United States and eastern Canada have only recently come in for a share of the attention of field ethnologists. While it is true in this region that outward modifications have resulted from foreign contact, nevertheless the internal aspect of life among many of these Indians has remained practically unchanged. Through several seasons of field-work in the past three years my own efforts have been to institute systematic research among the half dozen or more tribes comprising this group.

We have already visited the Montagnais of southern Labrador, the Abenakis of the lower St. Lawrence, the Passamaquoddis of Maine and the Micmacs of New Brunswick, and special attention has thus far been given to the Penobscots of Maine and the Malisits of New Brunswick.

It has been my good fortune during the last three years to spend part of each spring and summer among the various tribes mentioned, and, with the other objects of interest which I collected during this time, there are some which appear to

me to have special interest in relation to the arts of life, and which are moreover typical of the tribes which dwell in the northern woods where hunting and fishing provide the mainstays of life. Owing to their roving habits, the prime requisite in the articles manufactured by the northeastern Algonkian tribes in former times was lightness and indestructibility. Elaborate and cumbersome articles were avoided, and pottery, if used at all in the ordinary pursuit of life, was certainly not common. The best native ingenuity was displayed in constructing utensils that could be conveniently transported or those that could be used temporarily and replaced in a short time when needed.

The actual means of transportation also became highly specialized through the exigencies of travel. It is largely this which gives the appearance of primitiveness to the Penobscots and their neighbors. We find, for instance, a large proportion of objects made of the bark of the canoe birch, which has a wide distribution in the northern latitudes. All sorts of indispensable articles such as house coverings, canoes, cooking vessels, dishes, baskets and receptacles in general, as well as a multitude of other smaller things, were constructed of this invaluable material.

The recently acquired specimens show this trait quite clearly. A typical Penobscot canoe made of cedar wood, *arbor vitae*, and birch bark is shown in Fig. 19. This canoe belonged to Big Thunder, the late chief of the Penobscots, who is seen seated in the bow. The photograph was taken about nine years ago when Big Thunder, then about ninety years old, attempted to travel in a birch bark canoe from Oldtown, Maine, to Washington with one companion to visit the President, an attempt that failed owing to the sudden illness of the chief.

Next to the canoe, perhaps the most significant article in connection with

transportation is the birch bark pack basket, of which an excellent specimen may be seen in the collection now in the Museum (Fig. 20). In this tough and pliable receptacle, prized by the Penobscots, they store and transport the necessities of camp life. By means of a cedar bark strap passing across the chest, the

are found in the bottom of the vessel, which consists of a sheet of bark folded and fastened at the ends with ash splints or spruce root. On one occasion last winter I challenged an old man on his ability to boil water in a bark vessel. He constructed one in less than five minutes and within half an hour had brought



Fig. 19—A Typical Penobscot Birch Bark Canoe.

well-packed basket, supported on the back, may be borne with comfort.

Interesting on account of their simplicity and the unusual ingeniousness of the idea are the birch bark cooking vessels. In former times these were used so extensively that tradition, among the Penobscots at least, is silent in reference to any other aboriginal boiler. No seams

are found in the bottom of the vessel, which consists of a sheet of bark folded and fastened at the ends with ash splints or spruce root. He was then quite prepared to boil a mass of beans in his improvised pot.

An object of necessity to every Indian hunter among the northern tribes is his moose call, consisting simply of a sheet of birch bark rolled to form a cone and

fastened. This simple affair in the hands of an expert is capable of imitating the call of the cow moose so unerringly as to lure the bull within the range of the hunter's gun. A number of the calls made

decoration of articles in common use. These designs are often very complex. There is, however, to be found a simple motive which embraces all the curvilinear patterns from the simplest to the most



Fig. 20—Pennsylvanian Birch Bark Park Basket.

by well-known Indian guides and hunters have been recorded on the phonograph and are now in the Museum.

The decorative designs of the northeastern Indians may be studied from the

elaborate. This is the double curve motive which in its simplest aspect is shown in Fig. 21. With added interior modifications in the center and at the sides this becomes more complex until in some deco-

rated surfaces the simple unit is quite obscured. Although the variations are

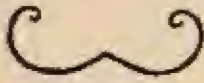


Fig. 21.

entirely due to the fancy of the Indian artist who builds up her design from a

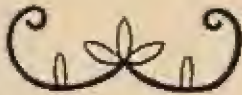


Fig. 22

simple double curve foundation, the decorative art of the Penobscots has its sym-

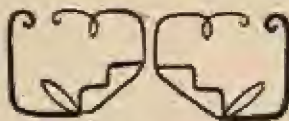


Fig. 23.

bolical side as well. I hope that after further study I shall be able to give an



Fig. 24.

ample interpretation to this symbolism, which at first seemed obscure.

F. G. SPECK.

NOTES.

DR. EDWARD SAPIR, Instructor in Anthropology, has accepted the position of Ethnologist-in-Charge on the Geological Survey of Canada, a post that has just been created by the Canadian Government.

Dr. Sapir came to the University Museum in 1908 as George Leib Harrison Research Fellow in Anthropology and in 1909 was appointed Instructor. He published last year in the *Anthropological*

Series of the University Museum his "Takelma Texts," a collection of Indian myths from Oregon, related in the original tongue with English translations by the author. During the summer of 1909 Dr. Sapir spent some time among the Ute Indians in Northern Utah and while there began a study of the Ute language and collected a number of myths. During last winter these studies were continued in the Museum by the assistance of Tony Tillomash, an Indian youth who had come from his home in Utah to the Carlisle School. By courtesy of the Superintendent of the School the Museum was able to take advantage of the abundant knowledge of his people's customs and myths which this youth was found to possess. Tony remained in the Museum till he left for his home in July. Out of the knowledge thus acquired Dr. Sapir has been preparing a study of Paiute mythology based on the myths recorded, and a grammar of the language has also been undertaken. In addition to his mythical narratives Tony sang the songs of his people and over two hundred of these, recorded on the phonograph, taken in connection with the myths, will make a very full record of the less material side of Ute culture, and leave us in possession of a very notable collection of data for the study of American mythology and linguistics.

In undertaking his new duties in the high position in which he has been called, Dr. Sapir will be under the necessity of delaying the completion of this important work, but it is hoped that a volume of Paiute mythology may be ready in about a year.

While Dr. Sapir's departure from the Museum is regretted by everyone here, his colleagues will all rejoice that his appointment to the most important anthropological post in Canada is one that is likely to promote the best interests of the science in that rich northern field where such a great

work remains to be done in preserving the aboriginal records and in observing the effect of a new environment upon different peoples newly transplanted from Europe in the course of the present active immigration.

The Director went to Mexico in August to represent the Museum at the International Congress of Americanists assembled there during the centennial celebration of the Independence of the Republic. During the meeting of the Congress, a committee consisting of delegates from Columbia University, the University of Pennsylvania, Harvard University, the University of Berlin and the University of Paris, together with a representative of the Mexican Government, drew up and adopted a plan for the formation of an international School of Anthropology to be located in Mexico City with the object of making investigations with relation to the ancient civilizations of Mexico and the adjacent countries. The five institutions named in the articles, together with the Mexican Government, are known as the patrons of the school who will appoint one representative each to form a governing committee. This committee will elect the director of the school, whose term of office shall be one year. The Mexican Government will provide suitable quarters for the school and make an annual appropriation for its support. It will also assign to the patrons all duplicate archaeological specimens that may be found in the course of excavations. The patrons undertake to provide one fellowship each in the school. Other properly constituted institutions may become patrons upon the conditions laid down in the articles.

Upon approval of the plan by the several institutions named as patrons, the articles of foundation take immediate

effect, and Dr. Seler, of Berlin, has been elected as the first director of the School.

During his trip to Mexico the Director of the Museum visited Yucatan and through the kindness of Señor Andamaro Molina and the courtesy of the owner, Señor Regil, obtained permission to photograph the original manuscript of "The Book of Chilam Balam of Chumayel." Accordingly this priceless document was brought to Philadelphia by Mr. Molina and loaned to the Museum for photographing. The Museum therefore, now possesses in addition to the beautiful annotated manuscript copy made by Dr. Berendt in 1868, a photographic copy which has the advantage of showing the original in its actual condition. Students of the ancient Maya language and literature have long been awaiting this opportunity of comparing Berendt's copy with the original, and it will now be possible to publish the text with the greatest possible accuracy. The copy in the Museum, in Berendt's clear hand, is occasionally more complete than the original is at present, owing to the wear and tear to which it has been subjected. On the other hand it is found that sometimes a word in Berendt's copy varies from the original text. Such variations can hardly be without significance in the work of so great a Maya scholar and so careful a copyist as Dr. Berendt, and a rigid comparison of the two texts has been undertaken.

Mr. Raymond Harrington, who has been in Oklahoma since the beginning of 1910 bringing to a close his ethnological researches in that region begun in 1908, is returning to the Museum with an extensive collection from the tribes among whom he has been living, and especially from those whose former seats were to the east of the Mississippi.

Harrington's work, which was initiated by Mr. George G. Heye in 1907 and which has been maintained by him for a period of four years, began among the Seminoles of Florida and was later carried on among the various tribes that remain in the Eastern and Southeastern States. It was afterwards continued with marked success among the representatives of the same tribes who have been removed from their old homes in the woodlands and on the eastern coast and who, Mr. Harrington has found, carried with them to Oklahoma many of their old ceremonial objects and have carefully conserved the knowledge of the ancient rites in which these objects were used. Perhaps the most interesting part of the collections made by Mr. Harrington during the present year consists of these ceremonial objects, which include more than a hundred of the sacred bundles around which were crystallized the most ancient traditions and the most solemn rites of the people.

Doctor Frank G. Speck, Instructor in Anthropology and assistant in the Museum, who is engaged in making a study of Penobscot etymology, spent the vacation in an Indian summer camp in Maine, returning with the inhabitants to their permanent villages and continuing his investigations at the Penobscot village of Oldtown and the Passamaquoddy village at Pleasant Point. Later he joined a Penobscot trapper on an extended canoe trip, to learn the customs of woodcraft. Before returning to Philadelphia Dr. Speck made a hurried trip of reconnaissance to the villages of the Malisits on the St. John River, the Bay of Fundy and Riviere du Loup on the Saint Lawrence, where Mr. Mechling, a graduate student in Anthropology at the University of Pennsylvania, carried on investigations throughout the summer.

Mr. George H. Pepper, assistant curator of the American Section, has been occupied during almost the entire summer in cleaning and putting in order the accessions made to the Heye collections. These have been especially extensive owing to Mr. Harrington's successful field work.

During the same period Mr. Heye has, with Mr. Pepper's help, catalogued all of this new material, which is now thoroughly prepared for study and ready to be exhibited.

Mr. J. O. Warfield, a graduate student in Anthropology, visited the reservations of the Pamunkey and Mattaponi Indians in Virginia, with a view to learning what traditions, if any, remain among these remnants of the Powhatan Confederacy. The Pamunkey reservation consists of about 800 acres of marsh land belonging to the State, which owns also the 65 acres allotted to the Mattaponi. The identity of both these tribes has almost disappeared by mixture with the white and black people with whom they are surrounded, and the loss of their Algonquian speech had been accompanied by the passing of the native traditions and habits of thought. Mr. Warfield's report will be given in full elsewhere.

Sir William M. Ramsay, Professor in the University of Aberdeen, and Lady Ramsay will lecture at the Museum on Saturday afternoon, November the 12th. An introductory address will be given by Sir William on "Archaeological Problems in Asia Minor, Present and Future." The subject of Lady Ramsay's lecture will be "Wanderings of an Archaeologist in Asia Minor," and will be accompanied by lantern illustrations.

Miss Edith H. Hall, who, with Mr. Richard B. Seager, carried on work for the Museum last season on the island of Crete, conducted excavations at Varokastro, three hours to the west of Gournia, where she began the work of clearing a large town site. In the upper stratum were found objects dating from the end of the Bronze Age and the beginning of the Iron Age; the lower stratum yielded specimens from the Middle Minoan period of the Bronze Age. In the earlier deposits fragments of beautiful cups were unearthed which mark the best period of Minoan art. Spear-heads of iron and bronze, sometimes the two metals welded together, and terra cotta figures of animals and goddesses were also found.

On November 19th, Mr. C. Leonard Woolley, who conducted the excavations for the Eckley Brinton Coxo, Jr., Expedition at Karanog during the last season, will deliver an illustrated lecture at the Museum entitled *KARANOG CASTLE AND THE CEMETERY AT ANIDEN*.

On December 10th, Dr. David Randall-MacIver, Director of the Eckley Brinton Coxo, Jr., Expedition to Nubia, 1907-1910, will give an illustrated lecture at the Museum on *THE TEMPLES OF VUHEN*.

It was announced in the spring that a course of lectures would be given in the Museum during the winter of 1910-11 by eminent scholars of Europe and America. The general title of this course of lectures, according to the announcement made at that time, is *THE HISTORY OF MANKIND*, and with one or two exceptions each lecture will be illustrated. The following is a preliminary announcement of the lecturers and their subjects:

December 3—DR. GEORGE GRANT MACGURDY, of Yale University, *The Antiquity of Man in Europe*.

January 7—F. F. OGILVIE, Esq., of Cairo, Egypt, *The Pyramids of Gizeh*.

January 14—DR. ALFRED M. TOZZER, of Harvard University, *Picture Writing and the Beginnings of the Alphabet*.

January 21—MISS EDITH H. HALL, of Mt. Holyoke College, *Ancient Crete and the Pre-Greek Civilization of the Aegean*.

January 28—DR. ALBERT LE COQ, Director of the German Expedition to Turkestan, *The Ancient Civilization of Turkestan*.

February 4—PROF. W. MAX MÜLLER, *The Ancient Egyptians*.

February 11—Lecture to be announced later.

February 18—MISS STONE, of the British School at Athens, *The Ancient Greeks and Their Mythology*.

February 25—MISS STONE, *The Acropolis of Athens*.

March 4—DR. EDWARD SAPIR, Ethnologist in charge on the Geological Survey of Canada, *The Origin of Spoken Languages*.

March 11—DR. FRANZ BOAS, of Columbia University, *Environment as a Cause of Variations in Man's Physical Structure*.

March 18—DR. A. A. GOLDENWEISER, of Columbia University, *The Institution of Totemism*.

March 25—Lecture to be announced later.

April 1—Lecture to be announced later.

Complete announcements of these lectures will shortly be sent to all members of the Museum. They will be given on Saturday afternoons, at four o'clock, throughout the winter, omitting only those dates that fall within the Christmas holidays. Each lecturer is a scholar of distinction, especially qualified by study or by original investigation to impart the most advanced knowledge on his particular subject. The course is provided especially for the benefit of Museum members.

Membership Rules

THERE ARE FOUR CLASSES OF MEMBERSHIP IN THE MUSEUM:

FELLOWS FOR LIFE, WHO CONTRIBUTE	\$1,000
FELLOWSHIP MEMBERS, WHO PAY AN ANNUAL CONTRIBUTION OF	100
SUSTAINING MEMBERS, WHO PAY AN ANNUAL CONTRIBUTION OF	25
ANNUAL MEMBERS, WHO PAY AN ANNUAL CONTRIBUTION OF	10

All classes of members are entitled to the following privileges: Admission to the Museum at all reasonable times; an invitation to any regular reception given by the Board of Managers at the Museum; invitations to all lectures given at the Museum; the Museum Journal; copies of all guides and handbooks published by the Museum, and free use of the Library. In addition to the privileges to which all classes of members are entitled, sustaining members and fellows receive, upon request, copies of all books published by the Museum.

Publications of the Museum

Transactions of the Museum, Volumes I and II, \$2.00 each.
Journal of the Museum, issued quarterly, single copies, 25 cents.
Gourbia, by Harriet Boyd Hawes, 1908, \$25.

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Part I, by David W. Myhrmann, 1909, \$5.00.
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- Vol. XIV: Documents from the Temple Archives of Nippur, dated in the Reigns of Cassite Rulers, with complete dates, by A. T. Clay, 1900, \$6.00.
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- Vol. III, No. 1, Excavations on the Island of Psalra, Crete, by Richard B. Seager, 1910, \$5.00.



VOL. I

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NO. 3

UNIVERSITY OF PENNSYLVANIA THE MUSEUM JOURNAL



SCARAB FROM NEW EMPIRE TOMB
AT ANIBEH

PUBLISHED QUARTERLY BY THE
UNIVERSITY MUSEUM

EGYPTIAN SECTION.

THE FORLEY R. COXE EXPEDITION.

WHILE Dr. MacIver carried on at Halfa the main work of the season, described in the last number of the JOURNAL, I was detailed to clear the town and fortress of Karanog, some eighty miles to the north. When the work was completed¹ a little time remained at my disposal, and I turned my attention to the graves of the

intendant of the Temple of Horus of Ma'am, about 1150 B. C., and was the head of a family of important local officials. A little to the southeast of the hill is a large cemetery of peculiar interest. In all Egypt these are the only shaft graves of the New Empire that retain their original superstructures, small square chapels of mud brick with vaulted roofs, which are carried up in solid brick-work to a point, so as to give the effect of a pyramidion standing on a straight-



Fig. 25.—Chapel of Mud Brick, Forming the Superstructure of a New Empty Tomb.

ancient inhabitants of Ma'am, an Egyptian town of the New Empire, whose ruins can be traced behind the modern village of Anibeh. In the high desert, about two miles from the river, stands an isolated hill wherein is cut a gallery-tomb with well painted reliefs; this is the tomb of Prince Pennut, a noble who was super-

intendant of the Temple of Horus of Ma'am, about 1150 B. C., and was the head of a family of important local officials. A little to the southeast of the hill is a large cemetery of peculiar interest. In all Egypt these are the only shaft graves of the New Empire that retain their original superstructures, small square chapels of mud brick with vaulted roofs, which are carried up in solid brick-work to a point, so as to give the effect of a pyramidion standing on a straight-

¹A report on this work is now in process of preparation.

western hills, and the pyramid-tomb itself with the mummied figure of Mery before it. But the mud plaster has fallen away and the paintings have almost wholly perished; the weight of the solid brick pyramids has broken through the vaults, and plunderers seeking ignorantly for booty have too often completed the ruin wrought by time and weather. It was in one of these chapels (that shown in Fig. 26) that Dr. MacIver four years ago

east; behind was a second court, which had probably been vaulted; it lay directly over the tomb proper, the stepped approach to which occupied its central area and had probably also been vaulted. The wall of the eastern courtyard was continued so as to enclose the western, leaving a space between the inner and outer walls about two feet six inches wide; this space was divided up by cross-walls at every seven or eight feet, and in these nar-



Fig. 26.—Interior of Chapel Forming Superstructure of New Empire Tomb.

found the magnificent painted stela of Mery, overseer of the King's treasury in Nubia, that is now in the University Museum (Fig. 27).

Dilapidated as they are, the rarity of these superstructures makes them very important. Even more remarkable was the building that stood above a large "dromos" tomb in the same quarter of the cemetery. In front was a fore-court with brick pillars and an entrance to the

row coffins were subsidiary burials, probably of servants or retainers of the local magnate. The whole arrangement recalls that of the royal tombs of the earliest Egyptian dynasties of more than two thousand years before.

These tombs were all cut down into the rock and were reached either by a perpendicular shaft or by a stepped dromos, the pyramid, when there was one, usually standing a little west of the shaft's mouth

above the chambers; but the poorer people were buried in small graves roughly hollowed out of the shelving rock face of the desert plateau or else in the loose sand below it. They were encased in clay coffins, with faces rudely moulded in relief; the better classes had had painted wooden sarcophagi, long since devoured by white ants.

their offices will give us a connected piece of provincial history, while their material belongings, thus accurately dated, will be very valuable for the archaeology of a little-known period. The tombs excavated last season form but a very small proportion of the total number yet to be dug, so that nothing like all the evidence is yet to hand, nor has there yet been time to



Fig. 27.—Stela of Mery.

Not a little of the interest of these graves lies in the fact that a good many of their occupants were members of the same noble family, whose chief representative, Prince Pennut, was buried in the painted hill-tomb behind the cemetery. The tracing out of their relations and of

work over what we have, but it is clear that the Pennuts of Ma'am filled for some generations most of the principal offices of the district. Thus Mery, Overseer of the Treasury in Nubia, whose stela is figured above, was the seventh son of Prince Pennut; his youngest sister, Thy,

Songstress of Horus of Ma'am, seems to have married one Hornekht, who at one time held the same office. This Hornekht had made for his sister, Tanezem, Songstress of Amen, a pretty blue glaze stela which is now in the University Museum.

the fragments of whose stela, now in the Museum, show that he too held office in Wawat, the inter-cataract region where Ma'am stands. Amongst other titles of people not necessarily connected with the family we have that of a person already



Fig. 28.—Red Sandstone Statuette.

Other sons of Pennut were scribes, priests, and temple officials; his grandson, another Pennut, who lived during the reign of Ramesses IX (1142-1123 a. c.) was buried under one of the better preserved pyramids, which he shared with one Weseremnef, presumably a relative,

known in history, Messui, Viceroy of Cush in the time of Siptah; of Pentaur, Captain of Troops in the days of Seti I; of Dwaba, chief priest of Horus of Shesyt; and of a deputy of Wawat, Mahu. The tombs had been very richly furnished, and though plundered in antiquity had

not been subject to that repeated robbery in ancient and modern times from which the cemeteries at Northern Egypt have suffered; consequently, though only a small number were opened, they produced a considerable quantity of fine museum specimens now on exhibition.

the paint with which they were originally covered was much faded and the inscriptions had disappeared; a more unusual specimen is that on Fig. 29, a beautifully carved though conventionally treated statuette of steatite which has been glazed with the vitreous glaze generally ap-



Fig. 29.—Statuette of Glazed Steatite.

On Fig. 28 is shown a statuette of Mahu, Deputy of Wawat; it is carved in red sandstone, the color heightened with a wash of haematite and the details picked out in black and yellow. Several statuettes of limestone were found, but

plied to scarabs; it is perfect except for the feet, which have been broken away. The personage represented is yet a third Pennut, whose relation to the great family is not at present clear. Another remarkable object is the faience cup or

chalice on Fig. 30; it is moulded in relief as a lotus flower, a type not in itself uncommon; but in this case, instead of the



Fig. 30.—Cup in Shape of Lotus Flower.

usual blue glaze being employed, the stem and outer petals of the flower and the interior of the cup are in a dead blue-black, the inner petals are white, and

within these again are petals of a deep red. In the same tomb as the sandstone statuette of Pennut III were found numerous pieces of colored faience inlay; the original background, which was probably of wood, has disappeared, but the glaze silhouette can be reconstructed as showing a man in the attitude of prayer before a cluster of papyrus reeds and bullrushes. These three objects throw a novel light upon one of the minor arts of the nineteenth dynasty.

The pottery, though plentiful, is not remarkable, the traditions of the eighteenth dynasty being for the most part faithfully followed and but slightly developed; one curious vase has the face, arms and breasts of a woman modeled in relief. From an unfinished tomb came a magnificent vessel of Cretan fabric decorated in creamy white and chocolate color, with bands of running spirals and marguerites. The specimen, according to Dr. A. J. Evans, falls very early in the



Fig. 31.—Vase of Cretan Fabric.

period Late Minoan I, and should be dated about 1600 B. C.

A large number of scarabs were obtained, bearing the traditional name of Thothmes III, that of Amenhotep, of Sety, of Ramesses II and of Queen Tan-sert. Two specimens were unique; one, now in the Cairo Museum, is a large heart-scarab of steatite with its wings widely extended, the markings on these and on the back picked out with gold foil; another, also of steatite, represents the sacred beetle perched on a pectoral of beads with hawk's head claps carved out of one piece of stone; these two came out of the same tomb. Two duggers of bronze with ivory handles were found in another tomb; they are of the regular eighteenth dynasty type; a small fragment of a vessel of blue and white glass with human figures moulded in relief upon it bore witness to the treasures that early plunderers had destroyed.

C. L. WOOLLEY.

BABYLONIAN SECTION.

A LOVE CHARM ON AN INCANTATION BOWL.

THE incantation bowls from Babylonia are mostly of a prosaic and monotonous character. As one of these bowls in the Museum finally proves, these vessels, properly inscribed, were inverted, duplicates being placed at the four corners of the house, so that by the process of sympathetic magic the demons might be imprisoned. The exorcisms are of a domestic character, for the banishing of all ill spirits from the house and bed and persons of the family concerned. By a natural development we find certain bowls, not represented, however, in our collection, destined for use in the graveyards, to lay the ghosts of the dead.

The inscriptions are tiresome repetitions of the names of the evil spirits and of the formulas which are efficacious to

bar them. They are of interest to the philologist as original documents of interesting dialects. The student of religion finds in them clues connecting the syncretistic faiths of the Babylonia of about 500 A. D. with their earlier sources. They cannot be said to be of general interest.

The Museum collection contains two exceptions to this grey monotony, and these are unique among all the bowl inscriptions. They spring from the passion which "makes the world go round"; as love-charms they will arrest the attention of many who have no interest in archaeology.

One of these is a charm effected by a woman to gain the love of her husband. The text is badly mutilated, but it appears that the woman is childless and desires a woman's blessing of children. The merely prophylactic character of bowl magic has been ignored, and the bowl has been used as a piece of convenient magical material.

But the other inscription is worth quoting at length. The translation reads as follows:

"In the name of the Lord of heaven and earth. Appointed is this bowl in regard to Anur,¹ son of Parkol, that he be inflamed and kindled and burn after Ahath, daughter of Nebazak.

"Presses of eternity (?) which have only been pressed (?) . . . a man in his heart. (3) One takes *hsk* and hotberis, which they call sunwort, *mtln* and peppers . . . and the mysteries of love which she has sprinkled upon . . . she shall sprinkle upon this Anur, son of Parkol, so that he be inflamed and kindled and burn after Ahath, daughter of Nebazak, and in passion and in the mysteries of love . . . pieces from his heart. . . .

¹The latter part of the name is lost.

²These dots indicate lacunae or unintelligible passages.

"In the name of the angel Rahmîel and in the name of Dîibat the passionate . . . the gods, the lords of all the mysteries. Amen, Amen."

This is a veritable love-philtre to gain the affections of a young man. Theocritus' second idyll at once recurs to us, in which the enamored girl goes through her adjurations of Hecate and performs the proper rites to rouse up love. Here, too, we have the deities invoked, the Lord of heaven and earth, out of convention; but more to the point are Rahmîel, whose name means love, and Dîibat, a form of the Oriental Venus. And as in Theocritus, we have the magic herbs. So far as their names can be interpreted, they are all pungent in character, and so symbolize the heat of passion.

For the same reason fire is a proper element in these amatory incantations, at least in the Greek and Arabic charms. In an erotic charm published by Doutté, *Magie et religion dans l'Afrique du Nord*, p. 253, the recipe is coriander, caraway, gum of terebinth, lime, cummin, verdigris, myrrh, blood, and a piece of a broom from a cemetery,—in which, however, the principle of selection is not evident.

The inscription is too obliterated to ascertain the *modus operandi*. Is the magic compound to be sprinkled over the person of the beloved? Or are we to understand a wax image of the object of passion, which is to be peppered with the hot herbs as the lady in Theocritus cruelly burns the wax figure in fire? This would be in line with old Babylonian magic.

The inscription is unique in the Semitic field, outside of the Arabic, as it is the only erotic charm of the kind that is known. This arouses the suspicion that it is of occidental origin, and is to be connected with the widespread love-magic of the Græco-Latin world, vouched for by its

literature and by the numerous original charm inscriptions found on papyrus and other materials. And the supposition is proved by an interesting identity of expression.

A most charming love-incantation on a lead tablet has been found at Hadrumetum, in the ancient Roman province of Africa. It has been frequently published; the English reader may be referred to Deissmann, *Bible Studies*, p. 271 (= *Bibelstudien*, p. 23). In it there is repeated again and again the desire of the girl that her lover come to her *ἐρώντα βασανίζομεν ἀγρυπνούντα* or *ἐρώντα μαινόμεν βασανίζομεν*,—"loving, tormented, wakeful," or "loving, mad, tormented." This trinity of terms corresponds to our text "that he be inflamed and kindled and burn." Also, the obscure references to the "heart" betray Greek origin, as to the Semite the heart is not the seat of love.

The inscription thus represents the reaction of western magic upon that of Babylonia. I have found other similar clues, but this is the most evident case.

J. A. MONTGOMERY.

AMERICAN SECTION

AN ALGONKIAN MYTH

IN the Indian villages of New England and the Maritime Provinces of Canada where the Penobscots, the Malise, the Micmacs and the Passamaquoddyes still occasionally exploit the old tales of their race, the good story teller, unaccustomed to make a parade of his gift, is apt to deny it altogether in the presence of a stranger. When, however, friendly intercourse has broken down the barrier of his reserve and the desire to please comes to the aid of his memory, his stock

*It is found also in an erotic papyrus inscription published by Wessely.

of stories often proves to be inexhaustible. If he is careful of the traditional proprieties of his craft he will tell no stories during the summer lest the listening snakes take offense. It is in winter when the snakes are asleep; when the pipes are lighted after the evening meal and the flickering firelight shows his attentive listeners through the smoke, that the Indian story teller makes his boldest excursions into the mythical past. As he weaves around his hearers the spell of his narrative the actual world is forgotten, and in its place rises a supernatural one in which the actors are beasts with human attributes.

From the stories that I have collected during the last two years I have selected for presentation here one which exhibits the main characteristics common to a large body of mythology. In making the translation my effort has been to preserve the structure of the original rather than to aim at literary form.

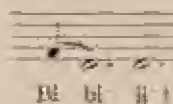
In this myth, the characters are the Mink (*Putorius vison*), the Fisher (*Mastola pennanti*), a member of the same zoological family, and a Snake. Fisher is a great magician, and the first part of the story brings this fact into view. In the latter part the envious Mink, the younger brother, having been driven from home for stealing his older brother's magic flute, encounters the Snake, who is also a magician. The unfortunate Mink, under the influence of the Snake's magic, is powerless to resist his commands, and when he is sent to catch fish for his host, cannot choose but obey. After an unsuccessful day's fishing, he returns empty handed to Snake, and is informed that he himself will be eaten. He is then sent to fetch a stick, and is explicitly enjoined that only a *straight* stick will serve the Snake's purpose, which, as he announces it, is nothing less than to spit the Mink

and roast him in the fire; but it seems as if the straight stick formed an essential part of the Snake's magic apparatus. While Mink is mournfully seeking for the instrument that is to be used for his own destruction, his older brother, Fisher, taking pity on his plight, comes to his rescue and imparts to him the magic of the *crooked stick*. The story ends with a great demonstration of the power of Fisher's magic as practiced by Mink in retaliation upon Snake.

THE MAGIC OF THE CROOKED STICK.

FROM THE NAUSET.

Here begins my story. A little old woman and Fisher and Mink, her two grandsons there were. The elder brother was Fisher. Off in the forest they had their camp. And the hunting was bad; then it was that they became hungry. Then went Fisher out to hunt, but just nothing he brought home. Now he spoke to his grandmother. "Grandmother," said he, "in the bark basket is my magic flute. Shake it out for me, for I must learn where the moose are." Thus he spoke to his grandmother, for he was a great conjurer and his flute was magic. Off he went, but behind him, following, crept the Mink, his sly younger brother. Now upon his flute Fisher blew the moose call—the moose lure.

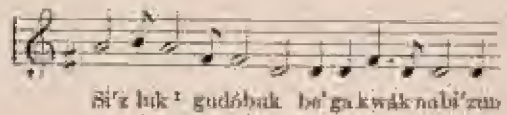


"hi bi ii." Three times he blew. Now he could hear them dancing, those moose. Now he knew. Where to hunt them he knew. Much meat indeed he brought home that day. Now again he set out and somewhere he went, that Fisher, for a hunting he went again. But Mink, his younger brother, now stayed behind. Quietly he stole the flute; his brother's

magic flute he stole, that sly Mink. Now as he had seen Fisher do, so he blew, and the moose started dancing again. Then to Fisher came a warning and he hastened home. "Who has been meddling with that flute," he said to his grandmother. "Nobody," he was told. Now when he seized the flute and blew upon it, no sound would it make. That medicine flute could be used only by the owner. Now was Mink in sore trouble. Whipped indeed he was, and sent away to roam. Is it not so with him even to this day?

So he went traveling, that Mink, till it began to grow dark in the forest. "Somebody's smoke I see rising over yonder," he said to himself. Soon into the stranger camp he came; for better or for worse, the wanderer came. Right there a large Snake was lying. "I greet you, venerable Grandsire," the Mink hastened to exclaim. "I am glad of your happy coming. Little One. Even this long time have I been hungry. You shall go fishing for me. I am so hungry for some little fishes!" That is what the Snake said to him. So the Mink went fishing roundabout. Again it was evening, and when it grew dark nothing had he caught, for empty handed he went back. "Ee! Grandsire, nothing at all have I caught. Tomorrow, indeed, something may be caught." Very sad the Mink felt because he got nothing at all for his fishing, for he too was hungry now. Then spoke Grandsire. "Ee! Grandson, do not be troubled, you yourself indeed I will be content to try for a meal. Go quickly now and bring a stick, but let it be a *straight* stick so that your insides may not be injured more than is necessary." Such was the manner of his speech, that Snake, for to the Mink he said that he would roast him on a spit. Then out again he went, the Mink, and wandering roundabout, he cried all over the place, for his thoughts were very sad.

"Now, indeed, I fear that I am going to die," he thought, and he sang a song as he went about looking for a straight stick. Three times he sang it, and this was his song:



"Snake going to eat me, straight medicine." Thus three times he sang sorrowfully, and all the time he kept thinking, "Snake is going to eat me and I must fetch him straight medicine."²

Now from afar off the Fisher heard his younger brother's voice crying, his younger brother Mink on whom the Snake was practicing his medicine. "Something, indeed, troubles my younger brother now. I had better go and help him." That is what Fisher said to himself, and he was a great magician. Stronger than the magic of Snake was Fisher's magic. To the Mink then he came, and even before he had spoken he knew what the trouble was. "Ha! ha! younger brother, do you go quickly and get a *crooked* stick, the most crooked stick you can find. Tell the Old One that you can straighten it for him." Just that he told his younger brother, whereupon that Mink went about again, and to his Grandsire Snake with a very crooked stick he came. "Grandsire," said he, "that is all I can find." "My Grandson, now, indeed, will your insides be sorely injured." To which the Mink made answer. "Oh, no! but I can straighten it, and you will rest your head right here and watch me. I will heat it at the fire and presently it will be straight." Now he held the crooked stick, and the Snake as he watched him fell into a doze. Three times he dozed, and the

¹This word is in the Micmac language.

²That is a straight stick.

third time Mink dealt him a mighty blow. Outside his wigwam then rolled that Snake. With fearful wriggings along the ground he rolled into the depths of a valley.

Now he cried with a loud voice, that Mink, far and wide he called that all might hear: "Oh! ye creatures! Come ye all and eat." Then he kept on cutting up the crooked one. Two valleys became filled up with the meat. Yes, more, a mountain of it rose between. And the creatures all came to eat, and as they ate they heard a Turtle over the hill calling, "Feed me meat," but they just kept on eating, and when Turtle arrived, all hot and panting, there was nothing left. It was then, my hearers, that I came away.

F. G. SPECK.

SOME CUSTOMS OF THE DELAWARE INDIANS

WHEN Penn made his first treaty with the Indians, their council fires burned at Shackamaxon, the site of Germantown. Here, according to their immemorial custom, were assembled the great chiefs of a powerful confederacy, which in its three tribal divisions, occupied the entire Delaware basin. In recognition of their admitted superiority of political rank, the members of this confederacy received from all other Algonkian tribes of the East the respectful title of "Grandfather." They called themselves Leni Lenape, the Real People; the French called them "Loups," wolves, and to the English settlers they were known as the Delawares.

Their traditional history contained in their national legend, the *Walum Olum*, or "The Red Score," was written in picture writing. Among the chiefs who sat around the council fires at Shackamaxon during the early colonial days was Tamond, from whom the Tammany Society takes its name.

Under pressure of the incoming white settlers, the Leni Lenape began to leave their old homes on the Delaware about the end of the seventeenth century, working westward by way of the Susquehanna and the Allegheny to what is now Ohio and Indiana. Later, one band moved into Canada, and the main body crossed the Mississippi, to settle, after many wanderings, in Oklahoma. To-day that great historical confederacy, whose principal seats commanded the site where Philadelphia now stands, is represented by seven scattered bands, numbering in all about 1,900 souls, who preserve in Oklahoma, Ontario, Kansas and Wisconsin all that is left of the ancient traditions.

Still speaking for the most part their native language, they have given up Indian dress and modes of life, and retain only a few of their ceremonies. In dress, houses and occupations they differ little from the whites about them. Only by persuading the older people to unfold the legends to which they listened in their youth, can a picture of the old life of the tribe be obtained.

In accordance with a social system which was very general among the American Indians, the members of the three tribal divisions of the Delawares were grouped into three clans, the Turkey, the Wolf and the Turtle. These clans did not correspond to the tribal divisions, whose distinguishing names, the Minsi, the Unami and the Unatachtigo were of geographical significance. Each tribe, occupying its own territory, would have a Turkey clan, a Wolf clan and a Turtle clan. The members of each clan believed that they were descended from the animal whose name they bore. Each individual was born into one or the other of these clans and claimed

It appears, however, from statements made by the Minsi that the Turtle was lacking in this division.

by right of inheritance the corresponding animal as his TOTEM. Inheritance was through the mother, that is to say a child belonged to its mother's clan irrespective

present usage, as Yellow Tree, Sleeping Down and Red Point. These smaller groups or sub-clans as we may call them for the present, were exogamic, that is to



Fig. 32.—Old Delaware Indian Amulets and Powder Charge. Presented to the Museum by Evelyn Stewardson, Esq.

of the father's affiliations. Moreover each clan was divided into twelve smaller groups bearing such names, according to

say a man might not marry within his own sub-clan, but must choose a wife from one of the other thirty-five sub-clans. His

children, then, would belong, not to his own sub-clan but to the sub-clan and the clan of the mother. Among the American Indians the exogamic groups very commonly correspond to the totemic groups,

and the blades of grass, the thunder and the wind, Man himself and the beasts of the chase had alike their actions and their destinies controlled by indwelling spirits.

Consequently it was of the utmost im-



FIG. 33.—Old Medicine Pouch of Woven Indian hemp containing flakes of mica, said to be scales of burned water serpent and used for rain making.—Hoye Collection.

but among the Delawares the custom appears to have been as described.

In the Delaware philosophy all the world was controlled by supernatural beings and all the objects and varied phenomena of nature both animate and inanimate were but the outward attributes of powerful spirits. The heavenly bodies

portance that man should be on friendly terms with the supernatural agencies and it was equally important that he should know how to thwart the hostile designs of any spirit whose enmity he might unwittingly have provoked.

Over all this spirit world ruled Gice-lamukaong, a name usually translated

"Great Spirit." He was the chief of all and dwelt in the twelfth or highest heaven.

He created everything, either with his own hands, or through his appointed agents, and all the great powers of nature were assigned to their duties by his word. He gave the four quarters of the earth and the winds that come from them to four powerful beings or *ma-nit-to-wuk*:—namely "Our grandfather-where-daylight-appears" (East), "Our grandmother-where-it-is-warm" (South), "Our grandfather-where-the-sun-goes-down" (West), and "Our grandfather-where-it-is-winter" or North. To the Sun and Moon, called "Elder Brothers" by the Indians he gave the duty of providing light; and to "Our Elder Brothers the Thunders," manlike winged beings, the task of bringing rain and of protecting the people against the great horned serpents and other water monsters. "Our Mother the Earth" received the duty of carrying and feeding the people, while "Living-Solid-Face" or Mask Being was directed to take charge of all the wild creatures of the forest.

How the spirit of the unborn child kept company with its father. The spirit of the unborn child was especially attached to the father and accompanied him on his daily rounds. Therefore if he anticipated the birth of a boy, he made a tiny bow and arrows and fastened them to his person as he went about his daily occupations in order that the little spirit that followed him might have playthings calculated to keep him near the father's person. If he imagined that a daughter would be born to him he carried in place of the bow and arrows, a little mortar and pestle such as women used for crushing corn. The father of the unborn child was apt to be less successful in hunting than other men, because the playful little spirit that

followed him on his jaunts would, if boys were wanting, sometimes frighten the game at the critical moment and spoil the luck. Hence it is only natural to suppose that a prospective father often received scant encouragement to join the hunting party, and we may imagine that the occasion would bring forth plenty of jokes at his expense.

How the spirit of the new-born child was induced to remain with its human kindred. The Delawares believed that the spirit of the child gained a firm hold on this world only after a certain time had elapsed. At first the little spirit was easily coaxed away by the ghosts of the dead; hence it was necessary to make life pleasant for the children so that they might choose to remain. Precautions were also taken to lead the envious ghosts astray, as when the new-born child was wrapped in clothes previously worn by a grown-up by way of disguise, or when buckskin thongs or strips of corn husk were bound to the little wrists or ankles in the hope of persuading the ghosts that the child was bound to the earth, or when the anxious parents cut holes in the little moccasins, so that the reluctant child might say to the ghosts, "I have holes in my moccasins and cannot travel to the spirit land." If the mother died in giving birth to her child or soon after, the little one, hearing her entreaties, was very apt to join her in the spirit world, and in such cases it was well to surround the babe with extra precautions so that it might be induced to remain for a time with those who loved it on earth.

How a child was named. The real name to be borne by a person through life was usually ascertained before birth through the medium of dreams from supernatural sources. Either the mother herself or else the father or perhaps an

intimate friend would be sure to dream that such a one was coming and accordingly the name of the expected child was known before his birth. Thus if someone dreamed that Walking-with-the-trees was coming, that was the name to be given the child. If it turned out to be a girl the circumstance was at once accommodated by adding a feminine suffix and the name became Walking-with-the-trees-woman. Among the Mound at least the name was announced at the annual ceremony.

the dangers and hardships that might befall him. In the exhausted state to which this severe treatment inevitably led, he was likely to have dreams and visions, in which some benevolent spirit came to his relief and promised to be his guardian through life. With the appearance of the vision the object of the ordeal was attained and the boy might return to the ordinary way of life, but ever after, so long as he lived, the spirit that was revealed to him in his vision remained his guardian



Fig. 34.—Cepemouist Lodge of the Delawares in Oklahoma.

How the Delaware Boy obtained his Guardian Spirit. About the age of ten every Delaware boy was subjected to a severe ordeal which he had to endure for a longer or shorter time according as the spirits were good to him or failed to take pity on his plight. With his face painted black, he was compelled to wander, fasting and without protection, through the forest for days at a time, exposed to all

spirits and on this spirit he relied for assistance in all the affairs of life.

Sometimes it was an animal who appeared in the vision; and the Crow, the Owl or the Wolf might become the guardian of the boy, or again it was the Sun or the Thunder or the Fire Ball or the Spirits of the Dead who came to him in his extremity, and promised to be his guardian. In any case the compact was

inviolable and a peculiar and sacred relationship was thus established between the individual and some object in the world about him, or else an invisible spirit of the spirit world.

Charms and Amulets. Often, by way of a token, the guardian spirit would communicate to the object of its care some sacred charm by which the presence of the protecting power was rendered visible and especially potent. In these communications received in dreams, the boy or man was often told to make a little image either of the guardian spirit itself or of

grotesque, man-like, furry creature riding a deer. This curious being, whose great moon-like face was painted one side black and the other red, told the boys that he was the guardian of all the animals and that he had come to their rescue and would help them as long as they lived. Some years later, because the people had grown careless and forgot to keep up the annual ceremony in which their visions were related, a long series of earthquakes ensued. Then Solid-Face appeared to one of the three boys, now grown to manhood, and explained the cause of these calamities. "Let the tribe resume the



FIG. 35.—Interior of the Ceremonial Lodge, showing posts with carved faces to represent the Messengers of Gitchumukong.

some object whose magical properties were vouched for. To this class belongs two little wooden masks and the face carved upon the powder charge made from the tip of an antler, all shown in Fig. 32. Such charms were worn upon the person and believed to bring good luck.

Living Solid-Face. This being was, in the beginning, a personal guardian spirit which came later to be a kind of a tribal divinity. Tradition has it that three boys, fasting in the forest, saw a

old rites in honor of the Guardian Spirits," he said, "and the earthquakes will cease." He then directed the young man to carve a wooden mask to represent his face and to provide a bear-skin suit to represent his body and to wear these at the ceremony. "When you put on that mask," he said, "you will represent me and you will have my power." Thereupon the earthquakes ceased, and since that time Solid-Face was always seen at the annual ceremonies, while every spring a special dance was held in his honor.

The Rain Maker. Once upon a time on the shores of the Big Water Where Daylight Appears, certain heroes captured the great horned serpent that lives in the depths of the sea and, while they held him captive, scraped some of the scales from his back and placed them in a little pouch woven from Indian hemp, with symbolical designs representing the

on the shore of a lake or stream, thunder clouds would immediately gather and the cornfields would presently be refreshed by rain. The owner of the charm must remove it before the first rain drops fell or he was in danger of being struck by lightning.

The Annual Ceremony. The vision of



Fig. 36.—Ceremonial objects of the Delaware:—drum, forked drum sticks, turtle shell rattles, mask and prayer sticks.—Hoge Collection.

lightning (Fig. 33). There is enmity between the Thunders and the great horned serpent who cannot show his head above the water without provoking the wrath of the Thunders who immediately gather to attack him with their bolts of lightning. Therefore, when the scales taken from the back of the serpent, were exposed on a rock, beside the sea, or

the Guardian Spirit and the adventures connected with that supreme event of boyhood formed the subject of songs and rhythmic chants composed in later years and recited once every year at the great religious ceremony. To-day there may be seen in Oklahoma a rough wooden lodge. On the twelve posts in the interior are twelve curved faces representing the

messengers of the Great Spirit. Here, in their land of exile, when the October leaves are yellow, a contingent of the Lenj Lenape make their camps to celebrate dried grass sit the assembled clans, each clan in its appointed place. On the opening night a chief addresses himself in a few words to the Great Spirit, and de-



Fig. 57.—Delaware Woman of Today. Photographed at Bartlesville, Oklahoma.

within these walls of rough hewn logs their ancient rites.

The ceremonies last twelve consecutive nights. In the center of the lodge burn two great fires and round the walls on

claring the purpose of the gathering gives way at once to the leader of the ceremony who takes his place by the great central pillar with its two carved faces, and shaking in his hand a little turtle shell rattle

to beat time; proceeds to chant in a high monotone the story of his Vision. Meantime two drummers who have taken their places before a peculiar drum made of a dry deer hide rolled up and stuffed with dried grass, take up the leader's chant in the same tone and carry it with him to its conclusion when the dance song is begun. This the drummers sing in like manner, beating time upon the drum, while the leader, still holding the rattle, takes up the dance, circling about the fire, and followed by as many of the assembled multitude as choose to take part. When all his verses are finished, after a short intermission, the turtle-shell is passed on from hand to hand until it reaches another man whose Vision entitles him to a place in the performance and he in turn takes the lead. When the turtle has thus made the circuit of the Big House, usually along toward morning, the people pray by raising their left hands and crying the syllable "Ho-o-o" much prolonged, twelve times. The twelfth cry they say reaches the twelfth or highest heaven and is heard by the Great Spirit. Then a feast of corn mush called sappen is eaten and the meeting breaks up until the following night.

On the fourth day a band of hunters sets out to obtain venison for the feast in the Big House, and returns on the seventh day. Before leaving, the hunters beseech the Solid-Face or Guardian of Game, impersonated by a man in bearskin costume and wooden mask painted half black and half red, to give them good luck. Solid-Face, armed with turtle-shell rattle and staff is seen from time to time about the camp as the ceremony progresses, and occasionally enters the Big House. Approximately the same ceremonies are enacted every night until the ninth, when the old ashes are carried out of the lodge through the west door, used only for this purpose, and a new fire is

lighted with fire sticks. Prayer sticks to hold up when the cry "Ho-o-o" is raised are distributed this night and a pair of very old forked drum sticks each bearing a carved human face take the place of the drum sticks used before. One of these sticks is represented as male and the other female, and the two are said to symbolize worship by both men and women. The pair obtained for this Museum are said by the Delawares to have been brought from their old home in the East.

The twelfth night is given up to the women to recite their visions, and the day after about noon the worshippers file out, and forming a line facing the east, twelve times cry the prayer word "H-o-o," which ends the ceremony. Before leaving the house the caretakers, the drummers, the speakers—everyone who has done a service to the meeting is paid, even to-day, with wampum.

M. R. HARRINGTON.

NOTES.

MR. HERBERT L. CLARK has presented to the Museum in memory of his father, the late Mr. Edward W. Clark, a collection of rare ethnological specimens from the South Seas (Polynesia and Melanesia). The collection has been in private hands in England for many years and dates from the early explorations in the islands of the Southern Pacific.

When Captain Cook, between 1768 and 1780, was making his wonderful voyages of discovery, the narrative of which forms one of the most delightful books in our language, the natives of New Zealand, Austral Islands, Hervey Islands, Samoa and the numerous other islands that dot the South Pacific Ocean, possessed among other qualities that rendered them peculiarly interesting and picturesque, a high

degree of skill in carving certain elaborate patterns on the hard and beautiful woods that their islands afforded. These products of native art proved so attractive to the early navigators that many rare objects were carried back to civilization on their ships, to find their way eventually into public museums or private collections.

It is a fortunate circumstance that brings a collection of these rare old treasures now into this Museum. The largest and most striking objects are from New Zealand, but the Clark collection includes peculiarly valuable series of carvings from many other islands. In this connection an abstract from a letter received by the Director from C. C. Willoughby, Assistant Curator of the Peabody Museum of Harvard, will be of interest to readers of the JOURNAL. Mr. Willoughby recently visited the University Museum to see the newly acquired collection which Mr. Clark's generosity has secured, and he writes concerning it as follows:

"Museum authorities are realizing more than ever the importance of securing without delay the small amount of ethnological material to be obtained from existing tribes which illustrates the life of primitive peoples, for in another decade little or nothing will remain of the early culture of the American Indians, or of the inhabitants of the Pacific Island groups. The native culture of the African tribes is also fast disappearing.

"It is now almost impossible to secure good old specimens from Polynesia [New Zealand, Austral and Hervey Islands, Samoa, Marquesas, Easter Islands, etc.]. Inferior imitations are offered to collectors and find their way into Museums. It was with special pleasure that I noted the valuable old Pacific Island material you have recently obtained. The collec-

tion of Austral Island ceremonial paddles is a remarkable one. There are few Museums which possess a more complete series. This is also true of the ceremonial adzes from the Hervey group. The objects in this lot from New Zealand, New Caledonia and other islands are likewise of great value. It would be difficult, if not impossible, to duplicate this collection, as most of the specimens belong to the days of Cook and other early explorers and are no longer to be obtained from the natives. Such examples of the old culture of these peoples are almost priceless."

The Museum has acquired through Mrs. C. C. Harrison an extensive collection of inscribed fragments of papyri and ancient manuscripts on parchment and other materials, of great interest and value for the student of ancient languages and literature. This collection, which was purchased from a European collector in Cairo, is probably the most extensive series of ancient oriental papyri ever brought to this country. It contains documents in Arabic, Hieratic, Demotic, Coptic, Greek, Hebrew and Pehlevi, and will afford an abundance of material for research in these several departments of oriental learning. This important collection which comes to the Museum as the gift of Mrs. Harrison was brought from Cairo to Philadelphia by Professor W. Max Müller, who spent last summer on the Nile copying the Demotic inscriptions on the temple walls at Philæ on behalf of the Carnegie Institution.

The article by Mr. Harrington on the Delaware Indians, printed in this number of the JOURNAL, is based on information gathered by him from members of the several scattered bands during the time he

spent among them in connection with the work of the Heye Expedition.

A series of some two score Maliseet and Penobscot songs, recorded on the phonograph, has recently been added to the Museum's collection. The records were secured by Mr. Meehling last summer among the Indians of St. John River, New Brunswick, while carrying on his studies in connection with his course in Anthropology at the University. The Malisee are the nearest neighbors of the Penobscots on the northeast, consequently this collection, added to one from the Penobscots previously secured by the department, makes a fairly strong representation of northeastern Indian music, as a basis for study and comparison.

Mr. J. O. Warfield made a second trip to the Pamunkey and Mattaponi Indians of Virginia in December, returning with valuable additions to his notes on medicine practices and the general ethnology of the Powhatians. A small lot of interesting native articles was obtained by Mr. Warfield from some of the older people with whom he became acquainted on his first visit.

Professor W. Max Müller is offering during the second term a course on Egyptian Archaeology for undergraduate and post-graduate students. This is the first time in the history of the University that the subject has been offered. Next year the course will be further developed and offered during both terms.

A very interesting collection from the Arunta tribe of Central Australia has recently been acquired by the Museum. The collection, which was made by Mr. J. T. Huston, formerly a missionary to the tribe, consists of boomerangs, spear

throwers, spears, shields, stone knives and axes, totem sticks, message sticks, charms, bull-roarers, and a curious pair of shoes designed to disguise the tracks of the wearer. Accompanying the collection which illustrates very fully the ethnology of the Arunta is a set of photographs showing the tribal ceremonies and characteristic types. A set of notes also accompanies the collection.

A dug-out canoe, apparently of native Indian manufacture, from the Hackensack River, Bergen County, New Jersey, has recently been added to the Heye Collection. Local tradition claimed this canoe, with another and a fragment of a third, to have been estimated from the river mud, near New Milford, a few miles above Hackensack, during some dredging operations. The ancient craft was patched up by its finders and used for several years by the longshoremen, later passing into the possession of Mr. Speck who continued to use it on pleasure trips. The hull is apparently of white pine hollowed to a thickness of about an inch along the sides, in length about sixteen feet, in width about eighteen inches forward and narrower astern, with pointed ends. This dug-out has been pronounced a typical example of the craft used by the Delaware Indians in northern New Jersey in early colonial days.

Doctor Speck went to Maine to spend the Christmas holidays with the Penobscot Indians with the object of collecting further data for his monograph on the ethnology of the Penobscots. By means of the several visits which Doctor Speck has now made, an interesting body of information has been secured from the survivors of this eastern tribe. The collection includes phonographic records of native songs, mythological narratives,

notes on the dances, ceremonial customs and general ethnological data.

So many persons have taken advantage of the course of public lectures given on Saturday afternoons that the lecture hall on each occasion has been filled to overflowing.

The course will be continued during January, February and March and the programme which has been sent to all of the members announces the names of several distinguished lecturers.

Doctor Charles Harrison Research Fellow in Semitics, is giving a course on cuneiform writing for post-graduate students in the department of Semitic languages and literature. Tablets from the Museum collection are used in the exercises in decipherment.

Dr. Albert von Le Coq, the German explorer and archaeologist, who is to lecture in the Museum course on March 4th, was commissioned by the Prussian Government in 1904 to make archaeological investigations in Turkestan. The expedition was successful in making an important discovery of ancient MSS. written in several languages, and in obtaining other valuable information regarding the ancient civilization of the country. The subsequent German explorations in Turkestan with which Dr. Le Coq has been associated have also been instrumental in adding very greatly to our knowledge of ancient Asiatic literature and art.

While returning with the treasures discovered by the expedition, Dr. Le Coq, finding the way home by Russia closed by reason of the war with Japan, decided to cross the Himalayas into India. In company with Captain Sherer, an Eng-

lish officer of the Royal Artillery, he succeeded in passing the mountain barrier. After crossing the Karakoram Pass his companion became seriously ill with pneumonia. By traveling from dawn to sunset for nine consecutive days Dr. Le Coq crossed the Sasar and the Mughl Pass twice, the last time in a blinding snow storm, in order to bring assistance to Captain Sherer. The height of these passes is 17,840 feet and the summit consists of some three miles of glacier. By this act of self-sacrifice Dr. Le Coq was able to bring aid to his traveling companion in time to save his life.

Sir Francis Younghusband of Kashmir sent an official report of this exploit to King Edward VII, and as a result, Dr. Le Coq was decorated by the Prince of Wales, now King George V of England, with the gold medal of the Order of St. John of Jerusalem. This is a decoration that is very rarely conferred and only in cases where extreme courage has been shown in saving life. Sir Richard Temple, who represents the Order of St. John in England, lays emphasis on the courage of Dr. Le Coq's exploit in the following words:

"A man who was himself in bad health and who, as an old and experienced traveler, knew exactly the danger of the situation, deliberately and of set purpose, in order to save the life of his fellow-traveler, three times crossed some of the most dangerous passes in the world under conditions of weather which he knew would become worse each time he made the attempt. And he did more than that. In order to secure that everything should be done that was possible to save his friend's life, he deliberately left behind food and clothing most necessary to himself."

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All classes of members are entitled to the following privileges: Admission to the Museum at all reasonable times; an invitation to any regular reception given by the Board of Managers at the Museum; invitations to all lectures given at the Museum; the Museum Journal; copies of all guides and handbooks published by the Museum, and free use of the Library. In addition to the privileges to which all classes of members are entitled, sustaining members and fellows receive, upon request, copies of all books published by the Museum.

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VOLUME II

PHILADELPHIA

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THE FUNCTIONS OF THE MODERN MUSEUM.*

IN its original significance the name *MUSEUM* was descriptive of the uses to which the place so named was appropriated. In the classic world a museum was a home of the Muses; and since the Nine Maidens presided over the different branches of knowledge, the place thus appropriated was one dedicated to learning and to the cultivation of the arts.

The great Museum erected in Alexandria by Ptolemy Philadelphus during the third century B. C. was the most notable example. Besides its great collections, and its botanical and zoological gardens, it was provided with lecture rooms and equipped with quarters for the professors. It was in fact a monumental example of the ancient Greek method of teaching, in which observation lay at the basis of intellectual training and the mind was kept open to every new experience. Its function was the same as that of our universities, but modern educational methods are so far divergent from those approved by the ancient Greeks that to-day the university and the museum are rarely brought into close relationship, and when this end has been attained, as at the University of Pennsylvania, the name University Museum, descriptive of this advanced type of institution, involves no duplication of language. Independent as their development has been, the fact that museums are sometimes found to-day in connection with universities is an indication that our educational habits are beginning to approach those of the ancient Greeks, and that at the same time the museum as a modern institution is taking on something of the

character of its classical prototype. So long has it suffered from associations of a different kind, that one is tempted to say that the Muses, having been driven from the seats of learning for unconventional conduct, took refuge in the variety show and the music hall; but in order to mark the very depths to which the unfortunate maidens declined, one must refer to certain collections that were held in high esteem and displayed with much learned circumstance at no very distant date in the old-fashioned museums. The exhibits in these places of public edification commonly included a series of objects which began with a flint arrowhead and ended with a petrified toadstool and which, if the museum were very fortunate, was likely to embrace also the foot of a mummy and the horn of a unicorn. Some readers may recall having seen in a museum that until recently was one of the educational exhibits of a famous eastern city, a fine collection of savage weapons from the South Seas displayed together with an ostrich egg and a stuffed mermaid. Doctor David Murray's excellent work, *Museums, Their History and Uses*, a book to which I feel myself greatly indebted, presents some very entertaining matter relative to the collections in the old museums. Nevertheless, in spite of many defects, these older museums have done a good service to mankind by keeping alive the habit of collecting and thereby preserving many objects of priceless historical worth, which would otherwise have been lost.

Dr. Johnson's definition of a museum as "a repository of learned curiosities" is sufficiently significant of indiscriminate methods and senseless collections.

Many instances might be cited from the literature of the day to show that the conception of a modern museum that figures in the public mind and for that matter in the minds of many of the most intelligent,

*The original draft of this article was printed under the title, "Museums and Public Education," in *Old Penn Weekly Review* for April 15, 1911.

needs to be readjusted in order to make it conform to the altogether new conditions that have been created by the application of scientific methods to the building of museums. The Johnsonian definition has done service too long. I have recently read an article in a contemporary review in which the University Museum is perversely described as "a noted repository of valuable curios." Thus do the popular beliefs of to-day often preserve the outworn ideas of yesterday.

Among the innovative functions of the modern museum, one of the largest and most useful is expressed in the position which it has come to occupy in relation to public education in the larger cities of the country. Following the development of the public library, this more modern institution owes its rapid rise in the educational world to the late recognition of a need which neither the library nor the public school has been able to supply. In the training of the young the most important thing is observation, a faculty which the schoolroom, so long as it relies upon its traditional methods, is imperfectly qualified to train. Accustomed to accept the spoken truth and to revere the printed word, the children of the schoolroom, relying upon the observations of others, are not taught to make use of their own eyes. It is true that in trying to overcome this disability, experienced educators are in the habit of bringing into the classroom specimens to illustrate the teaching of natural history. The classroom which is provided with a natural history cabinet is an appeal to the training of the observation. It is impossible, however, to turn the classroom into a museum, and experience shows that the collections which adequately illustrate the natural sciences or human history require for their proper preservation, their scientific classification and logical display, a large amount of

space as well as a special equipment and such peculiar facilities generally as only the modern museum can provide.

Accurate observation is essential not only to all strictly scientific occupations, but to success in any walk of life, and though the fact has not yet received its due consideration in modern educational systems, its recognition is becoming more assured. One of the most significant signs of this improved condition is to be found in the practice that obtains in some of the larger cities of the country, where the museum, with its assembled collections illustrating many branches of knowledge, and with its extensive apparatus for classification and methodical arrangement, is not only providing a most effective instrument for the education and elevation of the general public, but is working hand in hand with the public schools of which, in this respect, it is the complement. Teachers conduct their classes through the exhibition halls, explaining the objects to which their lessons have reference, and the pupils, using their own eyes, learn to recognize independently differences and resemblances between objects in a series and between different series of objects. The task of the schoolroom thus becomes a natural and therefore an agreeable exercise of the growing faculties, leading the child unconsciously through its own observation to independent habits of thought.

Like the pupil in the public or private school, where the older traditions survive, the reader in the public library has recourse to the observations of others and even with the aid of such abundant illustration as modern books afford, does not see things for himself, and consequently whatever profit he may derive from his reading, he is not in the way of becoming self-reliant.

In higher educational work, like that of the University, the function of the mu-

seum is not only to provide collections for the purposes of illustration but more especially to supply the materials for research. It is true that the classes in every department of a university that commands the advantages of a museum, are afforded opportunities which could not otherwise be had, for illustrating subjects appropriate to its regular curriculum. The collections that represent the various times of men, or the several types of human culture, and those that set forth the different stages in the development of the arts, bear the same relation to the teaching of human history as do the pictures in a gallery to the teaching of art or the subjects in a dissecting room to the teaching of anatomy. The modern museum, however, does more than this, for it is in itself an institution of learning, combining the more passive functions of preservation and the elucidation of knowledge by the display of relative objects, with the more active functions of original research and the dissemination of truth by lectures and by the publication of reports. In addition to its collections, assembled with reference to its adopted plan, it is provided with laboratories, a library and a specially trained staff. It is a modern scientific workshop where the assembled collections furnish the raw material for the constructive work of the specialist.

The relation of the museum to primary and secondary education or to special research, important though it is, is not by any means the relation of greatest service or of greatest value to the community. The majority of visitors to a museum do not come in classes but as individuals, and whereas thousands come under the direction of their teachers or guides, tens of thousands come independently, guided by the informing influence of their own tastes and interests; each one receiving pleasure and profit in proportion to his initial ca-

pacity and according to his individual habits of thought. The Museum, in other words, provides for every member of the community without regard to age, station or special training, liberal and altogether exceptional opportunities for self-instruction on a great variety of subjects that are closely related to the welfare and intelligence of the individual and of the community. In addition to this it provides for all alike, entertainment of the highest and most wholesome character.

Many persons visit the Museum as students in search of special information, but the majority come for pleasure or recreation or simply to satisfy a natural curiosity. The motives, therefore, which lead most visitors to enter a museum are precisely those which induce others to travel. It has long since been observed that travel is the best method of education, and the reason for this lies in the fact that travel tends to cultivate those habits of observation which, as already pointed out, lie at the root of all sound educational methods.

It must be granted, however, that in any modern city such as Philadelphia, the number of people who possess the means to travel is small in comparison to the number to whom this privilege is denied. To the great majority, who do not travel, the collections in a museum, assembled with care and arranged with order and method, convey a much more vivid and lasting impression of foreign peoples, their native arts and modes of life, than a whole library of illustrated books. In a well stocked museum, methodically arranged, the untravelled multitude may freely enjoy those observations upon foreign peoples and unfamiliar traits of culture which the few may attain by travel.

On the other hand, any one contemplating a journey beyond the boundaries of his own kindred and community, may by a visit to a museum, more readily than in

any other way, equip himself with a just fore-knowledge of the kind of people he is going to meet. Indeed, as customs change and the spread of civilization and modern ideas reduce all surviving races of men to a uniform level of culture, the novel and delightful impressions associated with the earlier days of travel and exploration can be achieved only by an excursion in a museum.

Each museum must have its special character to govern its operations and define the scope of its interests. At the University of Pennsylvania where, during the last twenty years, steps have been taken for providing in this community all those advantages which belong to a public museum, and which in other cities have been granted by the municipality, plans are being gradually developed for building up a series of collections that will, in their full development, illustrate the history of mankind. These collections, although they are the property of the University and maintained by private contributions, without expense to the city, afford the public all the advantages of a municipal institution such as the great museums in New York. They are free to the public, and with the power for primary education that is developed in them by trained specialists they are at the service of the public schools.

The principal function of the modern museum, then, is to promote the increase of knowledge and the cultivation of taste. It has become from every point of view a necessary instrument in modern education. How this condition is going to be met is a matter of the gravest importance to which the public welfare directs immediate attention. The work that the University Museum, in common with other institutions of its kind, aims to accomplish in building up collections to illustrate the course of human history, must be done now or not at all. The materials of archæ-

ological research, the witnesses to the history of antiquity are fast being appropriated by the museums of the world, and the time has come when a reasonably equal distribution of this common inheritance of the race is demanded by the educational necessities of the age in which we live and of the generations to come. The objects that illustrate the evolution of the arts and the industries, the growth of culture and the progress of civilization are becoming rarer every day. Many a clue to the history of our race will be lost with the passing of the native cultures of the more primitive populations of the world. Their methods of travel and transportation on land and sea, their implements and weapons, the objects connected with their religious and ceremonial life, their dress and decorative art, their very myths and legends, in short all that is left of their device and all that remains of their message to the world must be gathered now or lost forever. To save these human documents for the uses of science and of posterity is a service which the present generation owes to the human race and the instrument by which this service must be done is the modern museum.

G. B. G.

EGYPTIAN SECTION.

PHILÆ, THE FORSAKEN.

THE modern books of travel in Egypt never fail to praise the beauty of Philæ. The nineteenth century traveller on the Nile found in this green islet, set like an antique gem in the midst of the rude waters of the first cataract, a charm on which his memory seemed especially to linger, and which called forth many a tribute of admiration even from those whose interest in the pyramids was expressed in meters and from those who stood without emotion in the hall of Karnak.



Fig. 1.—Philae. Temple of Isis and Kiosk from the south.



Fig. 2.—Temple of Isis from the south-east.



Fig. 3.—The Kiosk from the north-east.



Fig. 4.—Temple of Isis. Part of the west colonnade of the outer court.

The peculiar appeal of Philæ seems to have depended partly on its situation, rising as it did from the flood like an enchanted isle; partly on its leafy sweetness with which it greeted the traveller on the Nile; weary of long stretches of sand; partly on the exquisite architect-

able structure at present standing, however, is the temple of Nectanebus II, a king of the thirtieth dynasty. Under the Ptolemies and the Roman Emperors, Philæ was newly dedicated to sacred uses and adorned by a group of temples worthy alike of their imperial builders and of the



Fig. 5.—Temple of Isis. The west colonnade of the outer court. Detail of palm capital.



Fig. 6.—Temple of Isis. The west colonnade of the outer court. Detail of composite capital.

ture that crowned it like a diadem; and partly, no doubt, on the sentiment that attached to its unbroken story of three thousand years or more.

If we may believe the statements of the Priests of Philæ in an inscription found at Schel, the island was identified from very early times with the religious life of the ancient Egyptians. The most venerated

Egyptian gods in whose honor they were raised.

The last stronghold for the worship of the Egyptian trinity, Isis, Osiris and Horus, tradition holds the island to have been especially sacred to Isis, who has thus become the guardian of the last hieroglyphic writings of the Egyptians, carved

in many a line on the latest monuments of their religion at Philæ.*

Two miles below Philæ stands the great barrage, to-day one of the wonders of Egypt. It has been erected by the British engineers to store the waters of the Nile for supplying the thirsty land. The great natural advantages which the region at the first cataract offered for an undertaking of this kind, weighed so heavily with the engineers and with those who have to deal with the regeneration of Egypt, that considerations of sentiment counted for little when the preservation of an ancient monument, however beautiful, was opposed to the practical ends in view.

The reservoir, computed to be more than twice the size of Loch Lomond, contains a promise of plenty for the land of Egypt. By bringing great areas under cultivation it gives new life to her increasing population, but before this blessing could be invoked upon the land a sacrifice had to be made, and no other victim than Philæ would suffice. There are those who say that the noble offering was worthy of so great a cause, and there are those who call it a disgrace, but in either case the leafy freshness of Philæ will never again greet the traveller on the Nile.

From December of each year to April, the island is submerged and one sails over it in a boat, passing through the flooded courts of the temple of Isis and between the walls of the kiosk. In May, at the rising of the Nile, the great sluices in the dam are opened and the river thus unbound goes on its unobstructed way to fertilize the lands of lower Egypt as it has done since the days before the first Pharaohs; and from then till December

the sacred island of the Egyptians is largely out of water, but the palms are gone, the pleasant freshness of the place is gone, the colors are gone and the dampness and the mould seem to be eating the heart out of the stone.

Just now the Egyptian Government is engaged in raising the dam to such a height that when the work is complete in



Fig. 7.—Temple of Nectanebus II.

1912 the general level will be so much higher than at present that with a full reservoir the temples will almost entirely disappear beneath the water.

For the present, during the winter months, the noiseless visit to Philæ by boat is by no means without its charm. Temple and pylon and colonnade and column, rising in most graceful lines from the water, have the unearthly look attributed to supernatural things; for the spectator approaching the charmed portals of Isis, feels, with something like the appre-

* I am indebted to Miss Caroline L. Ransom, of the Metropolitan Museum, for her kindly criticism of the historical references in this article, as well as for an exact identification of each of the photographs.

hensive presence known in dreams, that when the spell that raised them has been broken, the whole beautiful fabric will fade away and leave him waking on this magic lake.

The photographs reproduced on these pages, showing the scenery of Philae as it now presents itself to the tourist during the winter months, acquire a special interest from the fact that after the season of 1912 the temples will never again be seen under these conditions, for after that, during the winter season, owing to the raising of the dam, the buildings will be nearly all submerged. These photographs have been made by Mr. Eckley B. Cox, President of the Museum, and are published in the JOURNAL by his kind permission. They were taken during the winter of 1909 while the President was on his way to Haifa to visit the excavations of the expeditions sent out by the Museum. These expeditions, inaugurated and carried forward by Mr. Cox, and now brought to a close, worked far to the south of the first cataract. Philae itself was visited in the winter of 1910-11 by Prof. W. Max Müller, of the University of Pennsylvania, who spent several months copying the inscriptions on behalf of the Carnegie Institution.

G. B. G.

AMERICAN SECTION.

A TRIP TO CHICHEN ITZA.

THE first description of Chichen Itza is to be found in the notes of Diego de Landa, Bishop of Yucatan, which are supposed to have been written in the year 1566. It is as follows:

'Chichen Itza is very well situated 10 leagues from Itzamal and 11 from Valladolid, and the elders among the Indians say that they remember to have heard from their ancestors that in that place there once reigned three Lords who were

brothers and who came to that land from the west. And they brought together on the sites a great number of towns and people, and ruled them for some years with justice and in peace.

'They paid much reverence to their God and on this account they raised many and fine buildings, and of one in particular, the greatest of them all, I will here draw the plan, as I drew it when I was standing on it, so that it may be the better understood.*

'These Lords, they say, came over without any women, and they lived chastely, and all the time that they thus lived they were held in high esteem and obeyed by all. Then, as time went on, one of them disappeared, and doubtless he must have died, although the Indians assert that he left the country in the direction of Bacalar.

'The absence of this Lord, however it may have come to pass, caused such a change in those who ruled the State that soon they split into factions, so wanton and licentious in their ways, that the people came so greatly to loathe them that they killed them, laid the town waste and themselves dispersed, abandoning the buildings and this beautiful site, which is only ten leagues from the sea, and has much fertile land around it. The plan of the principal building is the following:

'This building has four stairways which look to the four quarters of the world, each is thirty-three feet in breadth and has ninety-one steps, and it is killing work to ascend them; the steps have the same height and breadth which we give to ours. Each stairway has on a level with the steps two low balustrades, two feet in width, of good masonry, as indeed is the whole edifice. The building is not square cornered, for from the edge of the ground

*Landa's plan is omitted here for consideration of space.

and from the balustrades in the opposite direction they have begun to work some rounded blocks which rise at intervals and confine the building in a very pleasing regularity. There was, when I saw it, at the foot of each balustrade, the savage mouth of a serpent curiously worked out of a single block of stone. The stairways being finished in this manner there remains on the summit a small level plain, on

wood, and it was used as a place for burning incense.

And at the entrance of this door or of the corridor a sort of arms was sculptured on a stone which one could not well understand. This building must have had many others (sculptures) and still has them to-day round about, large and well done and all the surface plastered over with them, and there still are in places survivals of



Photo by Teobert Maler.

Fig. 8.—Like a ruined watch tower looking towards the Lost Atlantis.

which stands a building arranged in four chambers. Three of them ran round the outside without division, each one with a door in the middle and covered with a gable roof. The fourth, that to the north, stands by itself with a corridor of thick pillars. The chamber in the middle, which must have been the little enclosure formed by the arrangement of the walls of the building, has a door which opens into the northern corridor; it is roofed above with

the plaster-work, so strong is the cement which they made there.

There was in front of the stairway, to the north a little way off, two small theatres built of stone with four stairways, and paved with flagstones on the top, on which they say they played farces and comedies for the solace of the public.

There runs from the patio in front of these theatres a beautiful broad causeway to a pool about two stone throws off. In

this pool they have had, and had at that time, the custom to throw into it live men as a sacrifice to the Gods in time of drought, and they hold that these men do not die, although they are never more seen. They throw in also many things made of precious stones and other things which they prized, so that if this land has had gold in it, it would be in this pool that most of it would be, so greatly did the Indians revere it.

"This pool has a depth of fully seven

a small building where I found idols made in honor of each of the principal buildings of the land, almost like the Pantheon of Rome. I do not know if this was a contrivance of the ancients or one of the people of to-day, so that they might meet with their idols when they went to the pool with their offerings.

"I found lions worked in high relief, and jars and such other things, that I do not know whether any one will say that these people had no iron tools.



Photo by Teobert Maler.

Fig. 9.—Upper tier of a building at Suyil, Yucatan.

fathoms to the surface of the water, and is more than a hundred feet across and is round in shape, and it is a wonder to look at, for it is clean cut rock down to the water, and the water appears to have a green color, and I think this is caused by the trees which surround it—and it is very deep.

"There is on the top, near the opening,

"I also found two men of great size carved in stone, each in one piece, naked except for the small covering which the Indians wear. Their heads were by themselves, with earrings in their ears as the Indians wear them, and there was a spike in the back part of the neck, which fitted into a deep hole made for it in the neck itself, so that when it was fitted in the

whole shape became complete." [*Biologia Centrali Americana. Archaeology.* By A. P. Maudslayi, Vol. III, p. 6 ff.]

In the summer of 1910 it was my good fortune to make a short journey into Yucatan in the southern part of Mexico. The one week that I was able to spend in that country of many unique and interesting features, derives a special charm and con-

brings within easy reach a country that cannot be described as accessible by land in any ordinary sense of modern travel.

From the beginning the voyage was propitious. At the dock in New York I encountered Dr. Tozzer and Professor Dixon, both of Harvard University, and the little excursion into Yucatan was agreeably performed by the three of us together. Dr. Tozzer had the advantage



Photo by Tenbert Males.

Fig. 10.—The House of the Nuns at Chichen Itza.

sequence from a visit to ancient Chichen Itza, one of the most famous of the ruined cities of America.

The journey from New York to Vera Cruz on a steamer of the Ward Line is one that affords the comforts and conveniences that are associated with modern sea travel, and not only provides the pleasantest way of reaching Mexico but, by touching at Progreso, enables the traveller to reach Yucatan by sea, and thus

of knowing the country and its people. Professor Dixon, when he stepped on the Ward Line steamer that day in New York, had just left the dock where a transatlantic liner had landed him with part of his luggage on his return from Australia and New Zealand.

I had never yet set foot in Yucatan or in its ruined cities, but years before, when I was on a steamer sailing through the Yucatan channel there was pointed out to

me from the deck a square building standing on a promontory of *Mugeros*, an island on the northeastern coast. This solitary building, standing on the last detached fragment of the great peninsula like a ruined watch-tower looking toward the Lost Atlantis, is well seen from ships at sea. If Columbus, on his fourth voyage, had steered a little farther west; if on the day when he met the Maya bark, his perverse fate had permitted him to turn his prow straight toward the setting sun, he might on the same day have raised this monument out of the western ocean, and steering by the loom of it, he might have entertained a brighter New World vision than any he had known.

Even then the cities of Yucatan were in ruins. Whatever may have been their end, they escaped by their earlier doom the fate reserved for the city of Montezuma and its contemporaries in Mexico and Peru. These fell a prey to the rapacity of the Spanish conquerors, but apart from the most meagre traditions of the Mayas, the fall of their ancient cities in Yucatan remains, like their rise, an unrecorded episode.

It was in August, 1910, that the small party of travellers who found themselves on the deck of the Ward Line steamer, disembarked at Progreso on the lighter that conveys passengers and freight from the steamer in the open roadstead. From the moment of landing we were attended by unobtrusive *vargadores* or porters, whose number always seemed to be in proportion to our needs, whose manners were courteous and whose movements were distinguished by remarkable decorum. Their light brown bodies were so aesthetically modelled and so soft in outline, their bare limbs so well rounded and their hands and feet so small that we were at first disposed to look upon them as rather effeminate. We abandoned this first impression as

premature on discovering that these good looking Yucatecan men were not only willing to carry our umbrellas on their smooth shoulders, but were equally prepared, without damage to their composure, to walk away in the same manner with a grand piano or an automobile. Our admiration was not diminished when we learned that it was their daily habit thus to dispose of even less negotiable burdens and such was the habit of their ancestors from time immemorial. As I watched them from day to day, it seemed to me that in the manners of the present inhabitants there is to be seen a close connection between their present life and the ancient traditions of Yucatan. Long continued usage and carefully conserved customs are strongly suggested in their cool, white walled homes with high-pitched thatch, where an artless providence unceremoniously effects a feeling of perfect comfort with bare mud walls, and floors unencumbered by any visible article of furniture.

The air of cleanliness which has often been remarked about their persons proceeds, as we found, from equally innate tendencies. Even our porters bathed their bodies and put on regularly every morning of the year clean white garments. This was at first something of a mystery, considering that Yucatan has no streams or lakes and the water that falls during the rains has to be stored and husbanded with great care for drinking and cooking. The sense of mystery was not wholly removed by the discovery that they bathe sumptuously in a cupful of water.

Such are the modern Mayas, the natives of Yucatan, a gentle and sturdy American folk of whom history has little to say, and whose place in contemporary annals is almost as inconspicuous. Living among the ruined palaces of their ancestors, they retain in their humble way many marked attributes of a cultivated people.



Photo by Teobert Maler.

Fig. 11.—Temple of the Tigers at Chichen Itza. Rear view showing the position of the painted wall sculpture in the ruined lower chamber.



Fig. 12—Detail of painted wall sculpture in the Temple of the Tigers. See Fig. 11.
From a cast in the Museum.



Photo by Teobert Maler.

Fig. 13.—Entrance to the Temple of the Tigers, showing broken column in form of a serpent which supported the façade.

Some of the more important ruins in Yucatan are readily accessible from the railroad that runs from Progreso to Merida, the capital, and thence toward the interior of the peninsula. Our time was so short that we had to be content with a visit to one of these more accessible ruins and we selected Chichen Itza. Leaving Merida early in the morning, we reached the little station of Citas about midday and after being served in a native house with a breakfast that would have done credit to a metropolitan café, we set out to travel the fifteen miles that still lay

over, to blow up, to exasperate, to ascend high." I desire to make my acknowledgments to the dictionary. The inventor of the volan was undoubtedly a linguist and likewise familiar with the qualities of his invention. There is, to be sure, an implied relationship between it and the flying machine. How substantial this relationship is can best be decided by those who have had experience of both, but even if it furnished me with a novel experience I venture the opinion that the volan was invented before the flying machine.

The second method of travelling is on



Fig. 14.—Detail of painted wall sculpture in the Temple of the Tigers.

between us and the ruins. The accommodations of the country afford three ways of accomplishing this. First, for people of luxurious habits of travel, there is the *volan*, in which the traveller is suspended by a pair of straps between two wheels and driven impartially over the irregularities of Yucatan which, though never as high as Pike's Peak or as deep as the Grand Canyon, are still for a level country, when regarded from a volan, very remarkable indeed. The name of this conveyance is derived from the verb *volar*, which means "to fly as with wings, to pass through the air, to vanish, to disappear on a sudden, to rise in the air, to move with violence, to project or hang

horsidack, and this was the method decided upon by our host at Citas. He procured three horses and, after some delay, the remains of an equal number of saddles. As each mount was worse than the others we thought it only fair to draw lots. I drew the worst and while I was contemplating the situation, Dr. Tozzer and Professor Dixon rode gaily away. A few minutes later, before I had cleared the village, partly as a concession to the too obvious feelings of the boys and girls who were playing in the doorways and partly from considerations of general comfort, I dismounted, gave the bridle to the nearest *urehú* and, resorting to the third method of travel that the country affords, resumed

the journey on foot. My injured feelings were much soothed when I overtook my mounted companions and passed them, one after the other, in the road.

Mr. Thompson, formerly American Consul at Merida, has a hacienda near Chichen with a house close by the ruins and though he was absent, the native major dome made our two days' visit very comfortable. Dr. Tozzer was familiar with the ruins, having, on a former visit, spent months on the site, and consequently we lost no time locating the various places of interest.

known as El Castillo, a great square pyramidal pile rising in successive terraces, supporting a building with vaulted roof. This type of architecture is characteristic of a certain class of edifice found in Yucatan and throughout the region of Maya civilization generally. Various writers have pointed out that this style was in all probability devoted to religious uses. El Castillo is, therefore, more properly called the temple.

As we sat at the top of the ruined stairway that ascends the slope of the



Fig. 15.—El Castillo at Chichen Itza. After Maudslay.

Although Chichen has been accurately mapped several times, especially by Maudslay and by Holmes, to locate a structure, even with the map in hand, would, without previous knowledge of the ground, require considerable time. The higher buildings, such as the Castillo and the House of the Nuns, can be seen from a distance, rising high above the trees, but others of less elevation or more ruinous condition do not betray their presence until you have searched them out through the tangled undergrowth.

The most striking building is the one

pyramid, just at the entrance to the temple itself, we looked out on a perfectly level horizon. In every direction the tree tops seemed us even as a prairie corn-field. Below us lay the buildings that had become so familiar to me through the eloquent description of Stephens, the faithful drawings of Catherwood, the splendid photographic plates and careful measurements of Maudslay and the instructive sketches of Holmes. There lay the Ball Court with the Temple of the Tigers, the painted colors on the stone still glowing softly from the dense green foliage

around; there was the Nunnery with its lattice-work of stone; there the Red House; there the Court of Columns and there the Round Tower or Caracol. One feature of the place alone was wanting. Where were the cenotes, those great wells of the Itzas, from which the place got its name? We did not wait long for an answer. As the sun drew near the horizon and the shadows of the trees began to climb the temple stairs and throw the base of the pyramid below us into shadow, a dark patch became visible on the face of the forest fifteen hundred feet away to the right, and another to the left. These shadows showed where the hundred foot mouths of the wells of the Itzas, forest fringed and open to the sky, swallowed the daylight and even now reflected the evening star from the still waters far below. The one to the left was the cenote that supplied the water to the ancient inhabitants of Chichen Itza; the one to the right was the Sacred Cenote, the Cenote of Sacrifice. From the great stairway of the pyramid a raised causeway ran straight to the brink, which, seen from our distant elevation, showed so darkly savage, that it might have been the entrance to the Underworld of ancient American mythology. We could not see the deep, dark, still water down below, but somehow it made itself felt and, as we looked down upon that point where we had seen the daylight devoured, the words of Landa came back to us with peculiar force and significance.

"In this pool they have had . . . the custom to throw into it live men as a sacrifice to the Gods in time of drought, and they hold that these men do not die although they are never more seen. They threw in also many things of precious stones and other things which they prized, so that if this land has had gold in it, it would be in this pool that most of it would be, so greatly did the Indians revere it."

The broad base of the pyramid below us was already immersed in night when the level rays of the sun invaded the temple door that opened on the platform where we stood. For a moment, as the great orb hung on the horizon, the strangely sculptured walls and columns caught the parting radiance and flung it forth again in one bright gesture of farewell. The sun had set and the shadows closed around us as we descended into the eager tropical night.

On the day following we visited all the buildings, but even in the bright glare of noon, nothing impressed us more than the wells of the Itzas. As we stood on the brink of that "pool" that Landa speaks of, it seemed a fitting place for the performance of such rites as he describes. Had it been known to the ancient Romans it surely would have figured in classic legend as Lake Avernus rather than the gentle and domesticated pond that is shown to the tourist in the vicinity of Naples. The Cenote of Sacrifice keeps its secret well, and though we raised many an echo from below we could call no spirit from that vasty deep to tell us what lay at the bottom of the well or what scenes were witnessed there in the old days of priestly rites when the causeway rang to the tread of approaching processions.

Chichen Itza has been described so often and so well that I can add nothing as a result of my two days' visit. It awaits excavation to bring it into line with the other cities of the ancient world which in other lands have one by one restored our knowledge of the past. Wherever the debris has been cleared away that encumbers the ruins beneath the encroaching forest, fine sculptures and paintings, adorning walls and pillars and foundations indicate the great archaeological interest of the site. One of these days Chichen Itza will claim the attention of investigators.

The Mexican government, the natural guardian of the ruined cities of Yucatan, will direct attention to their proper care. Travel will be made easier and Yucatan will share with Egypt the homage which the monuments of antiquity never fail to claim from the people of our modern world.

Already many architectural features of Chichen and the other ruined cities of Yucatan have been made familiar through the splendid photographic plates of Maudslay and the drawings of Holmes, each of whom has in turn followed up in recent years the pioneer work that Stephens and Catherwood did in the thirties. Other writers, as well have given accurate descriptions which have helped to promote the general knowledge of the country and its ruins. With the aid of the published photographs and plans any one can locate and identify each building and each point of interest.

The details of decoration in these buildings have, however, been incompletely copied. To get a faithful impression of the frescoes and painted wall sculptures, the student of Yucatecan art can have recourse only to the unpublished water color copies by Miss Adela Breton, whose devotion to Central American Archaeology has led her to spend many seasons at Chichen, in the laborious work of tracing the frequently faint and mutilated paintings of the old decorators. Lying in the empty chambers of the Temple of the Tigers and the House of the Nuns, this gifted woman has caught more accurately than any one else the spirit of the native artist; and industriously seeking a true interpretation of his art, she has succeeded in transferring with sympathetic touch, the lines and colors of the originals, which live again in her beautiful copies.

I made no photographs of Chichen, but I had the good fortune to meet at Merida,

Mr. Teobert Maler, who has spent the greater part of his life in Yucatan and who, during his extensive travels in that region, has assembled the splendid collection of photographs that has done so much to make the ruins of the Maya cities known throughout the world. All of the illustrations in this article are made from Mr. Maler's photographs, with the exception of the view of El Castillo, which is after Maudslay, and Fig. 12, which was made in the Museum, and shows a portion of a cast of the painted wall sculpture in the lower chamber of the Temple of the Tigers at Chichen. This cast, made from Maudslay's moulds and set up in the University Museum and colored by Miss Breton, after her copies of the original, is in style and composition and in the faithful rendering of color, the best example of the decorative art of Chichen Itza that can be seen without a visit to the ruins. G. B. G.

A VISIT TO THE PENOBSCOT INDIANS

THE biennial election of governor, lieutenant-governor, representative, council and other officers of the Penobscot tribe of Indians took place last fall, and the inaugural ceremonies followed on January first. At the invitation of the Indian officials I was present on this occasion, combining the opportunity of witnessing the ceremonies with regular field work in connection with my study of Penobscot ethnology, which has occupied my attention at such times as I could make convenient for several years.

On the afternoon of the first of January the Indians assembled in their dance hall, the old and the new officials seated on a platform at the head of the hall, while the spectators filled the rest of the interior. A short introductory speech by one of the leading men opened the meeting. This and all of the other speeches

were in the Penobscot language. A silver medal of peace, presented by President Andrew Jackson to the Indian chiefs of various tribes in 1827, which has since been handed down among the Penobscots as a badge of office, was transferred with

the dancing began, the singing being accompanied by a horn rattle held in the hand of the leader. Some of the men wore ornamented beadwork collars and other parts of Indian costume, a number of women wearing the entire native dress.



Fig. 16.—Big Thunder, late chief of the Penobscot Indians. Aged 90.

an appropriate speech from the ex-governor to the neck of the governor-elect, where it hung suspended from a ribbon. Speeches relative to tribal matters were made by all the new officers and the meeting was adjourned after a few words and benediction by the priest. In the evening

A visiting Sioux Indian, whose costume contrasted greatly with that of the Penobscots, added a touch of spirit to the dances which he readily learned, though they were different from the dances he knew. Most of the Penobscot round dances are performed by groups of four to eight, divided

evenly and facing each other. These groups move around the dance hall from right to left. The leader, with several men by his side, comes first. He does the rattling and the main part of the singing while the rest of the dancers join in every few syllables with the response. This, with the rattling and regular stamping, makes up the dance. At certain intervals indicated by the leader the dancers re-

swaying and winding. With much mirth and enjoyment the leaders try to snap off those at the end of the line. These save themselves by grabbing the bystanders and dragging them in. This performance is uproarious, and is the particular favorite of the young. It has a special song, punctuated frequently with plaintive cries and whoops.

The Mienac Dance is generally left un-



Fig. 17.—Piel Nicolat, Governor of the Penobscots.

verse their positions. The women who go before the men hold their bodies rather quietly, merely marching sedately two by two or in single file.

Another dance, a very popular one, is the Winding Dance, also known commonly as the Snake Dance, because the line of dancers winds about like the movement of a snake. The leader going first, the dancers link arms and start trotting in single file and in time with the song, turning this way and that until the line is

til the last, on the occasion of the recent election dances it was performed several times. The floor was cleared save for the spectators around the walls and a one man orchestra stooping at the head of the hall beat the rattle on the floor and sang the Mienac Dance song, of an entirely different style from the others. The dancers, always men, then run into the open space, stooping low and whooping, each man dancing with a kind of alternating hopping step hard to describe, and equally

hard to imitate. Sometimes two will face each other with heads low and turning face to face as though opposing each other. By midnight, after a few dances introduced from the white people, the dancing

in this Museum. According to the identification afforded by Governor Nicolar, the necklace (Fig. 18) represents the treaty of peace between eight or nine tribes, represented by nine sections, divided by dou-



Fig. 18.—Wampum necklace. Heye Collection.

came to an end. The estimable and highly respected man in whose honor this ceremony was held is Piel Nicolar, now governor of the Penobscots.

Among other matters, information was volunteered by Governor Nicolar concerning a woven wampum necklace which has for some time been in the Heye collection,

ble white bars, each enclosing a small white cross. Eight of the tribes indicated by the crosses are the Penobscots, Passamaquoddies, Malisits, Micmacs, Iroquois (Mohawks), Chippewa (eastern), Flat-heads (probably the Algonkins or Tete de Boules on the upper St. Maurice River), and Ottawas. This leaves out of account

the Abenakis of St. Francis, who being well known to the Penobscots, might have been the ninth tribe represented by the crosses.

I hope, however, to secure at a subsequent visit a more critical explanation of the wampum with the help of the old men

in the Mohawk country until as late as 1840.

Another article in the Heye collection which came from the Penobscots from the hands of a commercial collector is the finely carved cradle-board (Fig. 19). I learned the following story of this speci-



Fig. 19.—Carved Penobscot cradle-board. Heye Collection.

and a photograph. The date of this compact was not given, but the necklace is said to have been kept at Oldtown, the Penobscot village, as a record. This, indeed, may be one of the records made to commemorate the meetings which these northeastern tribes held every seven years

men from the Indians, the object having belonged to an old woman named Sisul, the oldest living member of the tribe, who is the source of the following legend.

"That cradle-board never was used by the maker because a very strange thing happened. This is the story, and it is a

true one of a long time ago. A man and his wife had lived for many years without children. At last they were made glad, for a child was to be born to them. The husband was so proud that he set to work to make a cradle-board as was the custom. But the cradle he made was to be finer than any hitherto seen. For months he labored, stained it with alder bark and

SOME HURON TREATY BELTS.

Several visits which I made among the Huron Indians at Lorette, P. Q., near Quebec, some years ago, gave me the opportunity of studying the decorative art and manufactures of these interesting descendants of one of the most prominent tribes. One of the chiefs possessed a handsome belt of white wampum which commem-



Fig. 20.—Penobscot Indian girl with bow and arrow.

carved it, front, back and sides. Nothing like it had been seen. Meanwhile he did nothing but think of his child that was to come, and so the proudest man in the village waited for his offspring. But his pride had overreached itself and he had to be punished. No child was born to him, but in its place a snake was found. This is how it happened and that cradle-board was never to be used by its maker."

F. G. S.

orated some treaty of long ago. Inquiries into the subject, based largely upon the material in the Heya collection, have since resulted in the assembling of some interesting material on the subject.

The historic Hurons are now represented by two main bands, one in Oklahoma known as the Wyandots, the other at Lorette, while some few are to be found in Ontario, near Detroit. Both of the main bands seem to be increasing quite

rapidly. The Wyandots have increased from 251 in 1885 to 378 in 1905, and the Hurons of Lorette now number 478 as against 293 in 1890. Inter-marriages with Algonkins of the Gatineau River, Alenakis of St. Francis, Malisits of Cacomna, and Montagnais of Lake St. John have, however, been quite frequent. The Hurons since they were first encountered by Champlain and the Jesuits, in what is now the Georgian Bay country in Ontario, have occupied an active place in the history of both the United States and Canada. The Iroquois at an early period began the devastation of their country until by 1650

eastern exiles was not much different in nature. The Iroquois continued to harass them even under the guns of Quebec, until as an old Huron woman declared, "My friend, the paths of our village ran with our blood."

As memories of these tumultuous days among the Hurons a few of the treaty belts of shell wampum beads woven on leather have been preserved to posterity.

The upper belt shown in Fig. 21 is of white shell wampum thirty-one inches long and four inches wide, with two human representations hand in hand in purple wampum. This was obtained from the

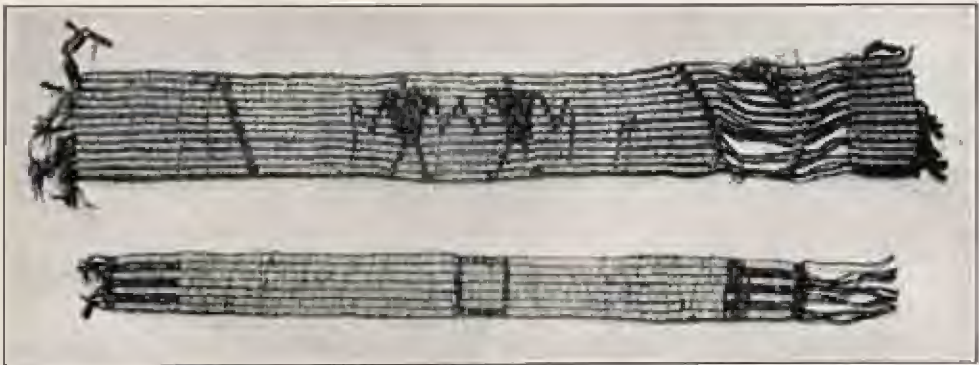


Fig. 21—Huron wampum belts. Heye Collection.

the confederated tribes of the Hurons were broken and some driven westward to Lake Superior, while others sought refuge with the French Jesuits near Quebec. Many Christian missions had already been founded among them. The western exiles became known in history as the Wyandots. From point to point they pressed south-westward, encountering successively the Sac and Fox, and Sioux who brooked no intrusion into their range. After the varied vicissitudes of frontier life through Michigan, Ohio, Indiana and Illinois the Wyandots found a home in Kansas and later Oklahoma. The rough treatment they suffered developed their fighting qualities which earned for them a prominent share in the Indian conspiracies of Pontiac and Tecumseh. The career of the

wife of a Wyandot chief in Oklahoma; and, while actual data is entirely lacking, appears to have been made in commemoration of peace between two peoples. The other belt, happily, is accompanied by more information which states that the central square represents the Huron nations; the purple stripes at the ends designate people and the white designates peace, meaning that the people of two nations, the Hurons and Iroquois, walk together in unity. This belt, which is twenty-six inches long and two and a half wide, was obtained from Atowa Tohonadilieto (an Iroquois) in 1903. It is said to have been presented by the Hurons to the Iroquois at a treaty in 1612 at the headwaters of the Ottawa River, Canada.

F. G. S.

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SECTION OF GENERAL
ETHNOLOGY.THE E. W. CLARK COLLECTION.
NEW ZEALAND.

THE most important acquisition made by the Section of General Ethnology in many years is the E. W. Clark Collection of ethnological speci-

L. Clark. In this collection are specimens from many of the islands, but, for the purposes of the present paper, those objects only which come from New Zealand will be described and illustrated.

The first European to see the shores of New Zealand was the Dutch navigator, Tasman, who, in 1642, came in sight of the island and sailed along a portion of



Fig. 22.—Maori man with tattooed face, wearing robe of native flax.

mens from the South Pacific Islands, which, as was announced in the December number of the JOURNAL, was presented during the present year by Mr. Herbert

the eastern coast, but perceiving what he believed to be a hostile demonstration on the part of the natives on shore, he sailed away without attempting to make a land-

ing. The island was not again seen by Europeans until 1770, when Captain James Cook, then on his first voyage around the world, circumnavigated the land discovered by Tasman and proved it to be a pair of islands separated by a strait. Cook and his men were the first Europeans to set foot on the land, and we have the great navigator's own account of this memorable visit in the pages of his narrative.

Since the first observations made by a European on a people living in a different state of culture, and just emerged from the unknown, have an interest altogether different from subsequent impressions, Cook's account of the New Zealanders as he saw them is quoted here at some length.

"The stature of the men in general is equal to the largest of those in Europe: they are stout, well-limbed, and fleshy; but not fat, . . . they are also exceedingly vigorous and active; and have an adroitness and manual dexterity in an uncommon degree, which are discovered in whatever they do. I have seen the strokes of fifteen paddles on a side in one of their canoes made with incredible quickness, and yet with such minute exactness of time, that all the rowers seemed to be actuated by one common soul. Their color in general is brown; but in few deeper than that of a Spaniard who has been exposed to the sun; in many not so deep. The women have not a feminine delicacy in their appearance, but their voice is remarkably soft; and by that, the dress of both sexes being the same, they are principally distinguished: they have, however, like the women of other countries, more airy cheerfulness, and a greater flow of animal spirits, than the other sex. Their hair, both of the head and beard, is black, and their teeth extremely regular, and as white as ivory:

the features of both the sexes are good; they seem to enjoy high health; and we saw many who appeared to be of a great age. The dispositions both of the men and women seemed to be mild and gentle; they treat each other with the tenderest affection, but are implacable towards their



Fig. 2a.—Carved tail piece of a Maori canoe.

enemies, to whom, as I have before observed, they never give quarter. It may, perhaps, at first seem strange, that where there is so little to be got by victory, there should so often be war; and that every little district of a country inhabited by people so mild and placid should be at

enmity with all the rest. But possibly more is to be gained by victory among these people than at first appears, and they may be prompted to mutual hostilities by motives which no degree of friendship or affection is able to resist. It appears by the account that has already been given of them, that their principal food is fish, which can only be procured upon the sea-coast; and there in sufficient quantities only at certain times: the tribes, therefore, who live inland, if any such there are, and even those upon the coast, must be frequently in danger of perishing by famine. Their country produces neither sheep nor goats, nor hogs, nor cattle; tame fowls they have none, nor any art by which those that are wild can be caught in sufficient plenty to serve as provision. If there are any whose situation cuts them off from a supply of fish, the only succedaneum of all other animal food, except dogs, they have nothing to support life but the vegetables that have already been mentioned, of which the chief are fern-root, yams, clams, and potatoes; when by any accident these fail, the distress must be dreadful; and even among the inhabitants of the coast, many tribes must frequently be reduced to nearly the same situation, either by the failure of their plantations, or the deficiency of their dry stock, during the season when but few fish are to be caught. These considerations will enable us to account, not only for the perpetual danger in which the people who inhabit this country appear to live, by the ears which they take to fortify every village, but for the horrid practice of eating those who are killed in battle; for the hunger of him who is pressed by famine to fight will absorb every feeling and every sentiment which would restrain him from allaying it with the body of his adversary. It may, however, be remarked that if this account of the origin of so

horrid a practice is true, the mischief does by no means end with the necessity that produced it: after the practice has been once begun on one side by hunger, it will naturally be adopted on the other by revenge. Nor is this all; for though it



Fig. 24.—Hanse post.

may be pretended by some who wish to appear speculative and philosophical, that whether the dead body of an enemy be eaten or buried is in itself a matter perfectly indifferent; as it is, whether the breasts or thighs of a woman should be covered or naked: and that prejudice and habit only make us shudder at the viola-

tion of custom in one instance, and blush at it in the other; yet leaving this as a point of doubtful disputation, to be discussed at leisure, it may safely be affirmed that the practice of eating human flesh, whatever it may be in itself, is relatively,



Fig. 25.—House post.

and in its consequences, most pernicious; tending manifestly to eradicate a principle which is the chief security of human life, and more frequently restrains the hand of murder than the sense of duty, or even the fear of punishment.

"Among those who are accustomed to

eat the dead, death must have lost much of its horror; and where there is little horror at the sight of death, there will not be much repugnance to kill. A sense of duty, and fear of punishment, may be more easily surmounted than the feelings of nature; or those which have been engrafted upon nature by early prejudice and uninterrupted custom. The horror of the murderer arises less from the guilt of the fact than its natural effect; and he who has familiarized the effect will consequently lose much of the horror. By our laws, and our religion, murder and theft incur the same punishment, both in this world and the next; yet, of the multitude who would deliberately steal, there are but very few who would deliberately kill, even to procure much greater advantage. But there is the strongest reason to believe that those who have been so accustomed to prepare a human body for a meal, that they can with as little feeling cut up a dead man as our cook-maids divide a dead rabbit for a fricassee, would feel as little horror in committing a murder as in picking a pocket, and consequently would take away life with as little compunction as property; so that men, under these circumstances, would be made murderers by the slight temptations that now make them thieves. If any man doubts whether this reasoning is conclusive, let him ask himself whether in his own opinion he should not be safer with a man in whom the horror of destroying life is strong, whether in consequence of natural instinct unsubdued, or of early prejudice, which has nearly an equal influence, than in the power of a man who, under any temptation to murder him, would be restrained only by considerations of interest; for to these all motives of mere duty may be reduced, as they must terminate either in hope of good or fear of evil. The situation and circumstances, how-

ever, of these poor people, as well as their temper, are favorable to those who shall settle as a colony among them. Their situation sets them in need of protection, and their temper renders it easy to attach them by kindness; and whatever may be



Fig. 26.—Carved paddle blade.

said in favor of a savage life among people who live in luxurious idleness upon the bounty of nature, civilization would certainly be a blessing to those whom her parsimony scarcely furnishes with the bread of life, and who are perpetually destroying each other by violence as the only alternative of perishing by hunger.

"But these people, from whatever cause, being inured to war, and by habit considering every stranger as an enemy, were always disposed to attack us when they were not intimidated by our manifest superiority. At first, they had no notion of any superiority but numbers; and when this was on their side, they considered all our expressions of kindness as the artifices of fear and cunning, to circumvent them and preserve ourselves; but when they were once convinced of our power, after having provoked us to the use of our fire-arms, though loaded only with small-shot, and of our clemency, by our forbearing to make use of weapons so dreadful except in our defence, they became at once friendly, and even affectionate, placing in us the most unbounded confidence, and doing everything which could incite us to put equal confidence in them. It is also remarkable, that when an intercourse was once established between us, they were very rarely detected in any act of dishonesty. Before, indeed, and while they considered us as enemies, who came upon their coast only to make an advantage of them, they did not scruple by any means to make any advantage of us; and would, therefore, when they had received the price of anything they had offered to sell, pack up both the purchase and the purchase-money with all possible composure, as so much lawful plunder from people who had no view but to plunder them."

Later in his narrative, describing the custom of tattooing which in New Zealand reached a development unequalled in any other part of the world, Captain Cook makes the following remarks.

"The faces of the old men are almost covered with these marks; those who are very young, black only their lips, like the women; when they are somewhat older,

they have generally a black patch upon one cheek and over one eye, and so proceed gradually, that they may grow old and honorable together. But though we could not but be disgusted with the horrid deformity which these stains and furrows produced in the 'human face divine,' we could not but admire the dexterity and art with which they were impressed. The

two were, upon a close examination, found to be alike.²

The practice of tattooing the face with lines and patterns of a special type is so characteristic of the Maoris, as the natives of New Zealand are called, that it marks them off from other peoples of the Pacific more strongly than their natural physical characteristics and even more than their



Fig. 27.—Carved heads of wooden staves. The weapon here illustrated is called the tisha and its use was governed by rules analogous to those for broadsword exercise.

marks upon the face in general are spirals, which are drawn with great nicety, and even elegance, those on one side exactly corresponding with those on the other. The marks on the body somewhat resemble the foliage in old chased ornaments, and the convolutions of filigree-work; but in these they have such a luxuriance of fancy, that of a hundred, which at first sight appeared to be exactly the same, no

habits with regard to dress and ornament. The object of such an operation, which must have been very painful, has been the subject of much discussion. Among the suggestions that have been made, the desire for embellishment and to obliterate by artificial lines the markings of age, probably contain elements of truth, but it is clear that there were other motives of more far reaching significance. Wil-



Fig. 28.—Carved blade of *Mamel tiki*.

liam Ellis, who spent some years as a missionary in the South Pacific during the early part of the nineteenth century, says that the pattern thus produced upon the face served to distinguish the members of one clan from those of another, that is to say, each clan had its own pattern which was invariably applied to the faces of the men. It was thus analogous to the stripes of different color on the tartans of the Highland clans. It is not unnatural that a warlike people, among whom feuds were frequent, should find it important to bear upon their persons some distinguishing mark by which each man might be recognized by his fellow clansmen in battle, and no mark could serve the purpose better than a design indelibly tattooed upon the face. However, the regularity and symmetry of the lines and the intricacy of the pattern always employed shows that they were not indifferent to embellishment in this respect.

The dwelling house of the Maoris, *whare* (pronounced wharry) was a framed structure of wood covered with thatch and for the most part without ornament. The fortified village or *pa* was, on account of the frequent warfare and danger in which the population lived, more common than the unfortified village, *kinga*. In either type of village was erected a structure of considerable dimensions built of wooden planks, covered with elaborate carving and called *whare mairi*. This was the council chamber and guest house of the village. A pair of posts from such a house is shown in Figs. 24, 25. In these examples is seen to good advantage the characteristic ornament of a Maori house. The house of the chief, and especially the house in which his property was stored, a kind of arsenal, was likewise elaborately carved after the same fashion.

The Maoris took great pride in navigation and the canoe was not only an object

of necessity, but one of their most prized possessions. The war canoes especially, of which hardly a perfect example remains, were admired by the early visitors to New Zealand as much for their wealth of ornament as for their sea-going qualities. Cook mentions having seen one 108 feet in length. Such a canoe was constructed out of a single tree and every step in the process was accompanied by fitting ceremonies. First the tree was felled to the accompaniment of a song prescribed by a tradition. It was hollowed out by means of fire and the stone adze, for the Maoris had no metals. The laying of the keel, the placing of the ornaments and the launching were all attended with religious ceremonies and festivals. The ship builders formed a caste by themselves with special privileges, and even the gods were said to build ships and undertake dangerous voyages.

All races of men have some story to tell about their own origin or early migration, but that told by ancient Maori tradition is one of the few that has got itself accepted by men of science as a reliable record. This tradition is a favorite theme of Maori songs, which tell how the ancestors, fleeing, as a result of civil war, from their old home in a half mythical land called Hawaiki, built a fleet of canoes and launched upon the ocean. After a very long journey and great sufferings, they landed at New Zealand. Tradition gives the names of the canoes in which the voyage was made and tells how the seeds of the sweet potato and the gourd were placed on board as well as the sacred red paint. It also tells of storms encountered that scattered the fleet and how the daring fugitives were assailed by doubt as to whether they should sail east or west; how there was mutiny among the crews; and how they halted at various small islands to repair their canoes as they went

along, until, exhausted and starving, a remnant of the expedition reached New Zealand. The different tribes trace their descent from the different canoes and they point out the exact spot where each crew landed.



Fig. 29.—An example of the *mere* or chief's club of green jade.

In the beautiful land of which they thus became the inhabitants, the Maoris found already provided for them a plant peculiarly adapted to their needs for the manufacture of clothing which, with industry and artistic skill, they wrought in the course of time into cloths of great

beauty and fineness of texture, and garments of wonderful variety. This plant was the New Zealand flax, which was carefully cultivated by the Maoris and its fibre, prepared by their ingenious methods for the finer cloths, was as soft and lustrous as silk. The art of weaving was considered so important that in each community a specially constructed house called a *whare pora* was set aside for the

lose all memory of what she had been taught in the *whare pora*.

WEAPONS.

Being frequently engaged in warfare, a profession which was considered most honorable and to which all men were carefully trained, an armory was an essential part of the Maori's equipment. Without knowledge of metals, they were dependent



Fig. 30.—Clubs of polished whalebone.

instruction of pupils, who were initiated into its mysteries with secret rights conducted with great solemnity. After the young woman had graduated from the *whare pora* she was mistress of her art and there was nothing which she did not know about weaving, but in the exercise of that art certain forms and ceremonies peculiar to her calling must be observed throughout her life. Any omission on her part in this respect would cause her to

for weapons of offense and defense on such materials as nature provided. These were hard, tough woods, capable of taking a high finish, the bones of the sperm whale and the hard fine grained stones which the country afforded, including the much prized *pounamu* or jade.

The weapon always carried by persons of distinction, which served also as a sign of rank, was the *tiaha*, which consisted of a staff of very hard wood, about five feet

long, carefully shaped and polished throughout the entire length, except at the head, which was carved in the manner shown in Fig. 27. The rest of the weapon was either polished, or, in rare cases, carved throughout the entire length, as the specimen shown in Fig. 27, No. 1. The other end of the same specimen is shown in Fig. 28. Such a carved *tiaha* would

shape of the weapon always remained the same: at the point where it was grasped by the hand it was round, and the other end took the form of a blade. Like certain swords of European tradition, the *tiaha* was an oracle to its owner, possessing great powers in the way of augury.

Another important class of weapons was called *pata*, a kind of short club



Fig. 31.—Carved wooden dancing clubs.

be carried by a great chief as his insignia. The *tiaha* was also indispensable to the Maori orator, who held it in his hand as he delivered his speech. As a fighting weapon the management of the *tiaha* was studied and practiced with as much care as that given by the expert swordsman to the mastery of his blade. It had its traditional rules and usage, with various guards and points. The

carried in the belt. The greatest weapon of this class was the *mere*, a club with a flat blade made of the precious jade of New Zealand. This material, it appears, was obtained with great difficulty and tradition ascribes an extraordinary value to a piece that was suitable for a chief's *mere*. Around certain famous *meres* which became celebrated on fields of battle, Maori history, as related in the songs



Fig. 32.



Fig. 33.

Figs. 32 and 33.—Carved wooden boxes.



Fig. 34.—Carved wooden box.

and ballads of the people, seems very largely to center. The renown of such *meres* was like that of certain swords and battle-axes used by the heroes of European romance. The stone from which they were made is one of the hardest known to lapidaries, but, nevertheless, it was shaped with great skill and wrought into an object of beauty by the New Zealand

craftsman. A very fine example of this famous weapon is shown in Fig. 29. This specimen is $16\frac{1}{2}$ inches in length.

Another form of *putu* was made from a fine grained basaltic rock, and other forms were made from the bone of the sperm whale (Fig. 30). One of these was a peculiar fiddle-shaped club with a short handle, called *kotiar* (Fig. 30, No. 5).

Still another form of *putu* was the curved weapon made either of bone, as in Fig. 30, No. 4, or wood, as in Fig. 31, Nos. 1, 2 and 3. This weapon, often beautifully carved, was much used in the dances, where it was brandished in the hand.

CARVED BOXES.

The skill of the Maori woodcarver was frequently displayed to great advantage and perfection in carved wooden boxes. These were used for holding *meres*, the feathers used for decorating the hair on great occasions or valuable possessions of any description.

THE HEITIKI.

Captain Cook, in common with all the early visitors to New Zealand, mentions the *heitiki* as the characteristic personal ornament of the Maori. All of them noticed that each *heitiki* was regarded with great affection by its owner. In fact, it was one of the most prized



Fig. 35.—Carved wooden box.

possessions, for, in addition to the amount of labor and skill which was required to shape the object from jade, it was associated with the ancestral history of the owner, being handed down from generation to generation, as a family heirloom. The shape of the *heitiki* was always that of a grotesquely conventionalized human figure and the material was almost always jade. It was suspended round the neck by means of a plaited cord of flax. One end of the cord has a piece of bird bone attached which is passed through a loop at the other end by way of fastening. The eyes are sometimes decorated with rings

of halotis shell inlaid in the stone. The *heitiki* was worn about the neck in remembrance of dead relatives, by each of whom it had in turn been worn. A fine specimen in the Clark Collection is shown on the cover of this JOURNAL. It was brought from New Zealand by Midshipman Burr, of the "Discovery," one of the two ships of Captain Cook's third voyage around the world. The specimen remained in the family of Midshipman Burr until it became the property of the University Museum. It measures four inches in length and is carved out of a beautiful green jade.



Fig. 36.—Detail of the border of a Maori robe woven from native flax

SOME EAST AFRICAN TRIBES.

THE Museum has recently acquired, through purchase, a collection of photographs representing several of the tribes in British East Africa.

The coast of that country, as is well known, is occupied by the Swahili, a people composed of a mixture of arab and negro tribes and professing the Mohammedan religion. The Swahili have been traders and slave hunters in time past, and in the course of their expeditions and slave raids into the interior have given their language a wide diffusion, until it has become a kind of lingua franca throughout a considerable portion of the protectorate.

South of Mombasa, and slightly in the interior, are the Anika, who are between the Swahili of the coast and the Akamba of the farther interior. The two last tribes are of pure Bantu stock. The religion of the Anika is not Mohammedan, but characteristic of the eastern Bantus. The hyena is the totem of this tribe. They regard it as their ancestor and severe penalties are attached to killing it. The Akamba are skilled in iron working and in the manufacture of spears. They are, however, a peaceable folk, devoted to agriculture and the care of their herds.

The warrior tribe, the Massai, long known by their semi-nomadic and predatory habits to their neighbors in east Africa, have made a great impression on the civilized world, but it appears they are doomed to extinction, for, unlike the neighboring tribes whom they have intimidated so long, they are quite incapable of adapting themselves to the changed conditions of existence which has come in with the Europeans. The only occupations to which they will condescend are tending their herds of cattle, which they move from place to place over their wide

stretches of grazing land, and the prosecution of warfare upon their neighbors, especially the Akamba and Akikuyu. The last named tribe is one of the most interesting in British East Africa. The best and most complete account of the Akikuyu is to be found in that excellent study of East African ethnology "With a Prehistoric People," by Mr. and Mrs. W. Scoresby Routledge, published in 1910, a book which supplies almost the only available information about this little known people. The following quotation may serve to indicate the kind of impression made upon the authors by this untaught and isolated tribe.

"In disposition the Akikuyu are naturally cheerful, merry, loquacious, and laughter-loving, soon forgetting their troubles and lacking the spirit of vindictiveness; they have a great sense of justice, and endorse the infliction of the severest punishment if they know they are in the wrong.

"They are naturally polite in their intercourse with one another, and a very definite code of good manners exists. It is the custom for women and children to stand aside for warriors to pass on the path, but the warrior will always yield the road to an old woman. The order kept at all functions is very striking. Even the children, though never harshly treated or spoken to, behave considerably and courteously; very differently from the little European wild beasts who are permitted by their parents to conduct themselves in such a way as to render life a scourge to all the other passengers on board the mail steamers to East Africa.

"The custom of spitting on an object in order to secure good luck is found amongst the Akikuyu. This habit exists amongst our own lower orders in the custom of spitting on a coin.

"To spit upon a person or thing is also an expression of good-will. The blacksmith spits upon the sword he has forged before handing it over to the owner; so, too, courtesy demands that a man should spit in his hand before offering it to a friend, and the female visitors spit on the

the goat is relished. Fish is declared by custom and tradition to be unfit for food and the person who eats it becomes unclean. In fact, the food supply is obtained entirely from the products of agriculture, together with the flesh and milk of their herds and flocks. A poor



Fig. 37.—Group of Akikuyu men.

newly-arrived youngster as a sign of welcome."

The Akikuyu inhabit the mountainous country around Mt. Kenya. They are peaceable and devoted to agriculture. They possess goats and sheep, but farming is their principal mainstay. Custom prohibits them from eating wild game, although the flesh of the sheep and

man lives with one wife and occupies a single hut. The rich man's household consists of eight or ten huts, one for each wife, since each wife is entitled to a house of her own.

In the collection of photographs to which reference has been made are several which appear without doubt to portray the Akikuyu.

One of these photographs, shown in Fig.



Fig. 38.—A Masai warrior with shield and iron spear. The point of the spear when not in use is protected by a pad. The headress is made of a lion's mane.

37, represents a group of Akikuyu men. It shows the single cloak made of goat-skin and fastened over the shoulder, the quills that are worn in the cartilage of the ear, the rings or plugs that are in-

serted in the lobes, and the cap made from the goat's stomach, which is sometimes worn on the head. It also shows three distinct methods of treating the hair among the men. In the figure at the



Fig. 39.—Akikuyu girl with water jar.

left the head has been shaved. In the one at the right, standing, the hair has been twisted with shreds of bark into little cords. When these have been formed over the entire head, they are

parted on a line passing from ear to ear over the crown. All of the cords in front of this line are gathered forward and their ends whipped together to form a pendant which hangs over the middle of



Fig. 40.—Akikuyu warrior with shield and iron spear. The dark plumes of the vulture stripped from the vanes of the feathers in long curls are whipped to the tufts of the hair.

the forehead. The whole is then anointed with red ochre mixed with tallow. The commonest way of wearing the hair among the men is seen in the other individuals in the group. This consists sim-

ilarly the method of standing at ease with one foot crossed over the other, and also the practice of sitting on the heels. Perhaps the most pleasing method of hair dressing in vogue among the men is that



Fig. 41.—Two Akikuyu women.

ply of having it lengthened by twisting it up into tufts with shreds of bark to any desired length, giving the hair a ropy appearance which produces a striking effect. The same photograph shows ad-

seen in the young warrior in Fig. 40. Taking the long, dark plumes of the vulture, and, stripping the vanes from the stem, they whip the curling bands of feathers thus obtained to all the tufts



Fig. 42.—A group of Akikuyú mahléns.

of hair on the crown of the head. The head is then anointed with mutton fat and red ochre, in such a way that the bright black feathers contrast with the colored ointment and harmonize with the color of the skin.

With the women, hair dressing is a much simpler matter. Young women

extensively worn by the women by way of ornaments. For both sexes every age and every occasion has its corresponding dress and ornaments. Several of the women seen in the photograph, Fig. 56, are decorated about the abdomen by means of scarification.

The supreme event in the life of every



Fig. 43.—A group of Akikaya women.

have their heads shaved with the exception of a certain area on top. As they grow older the tuft is made smaller until among the oldest women the entire head is shaved.

The costume of men and women alike is carefully prescribed by custom. The garments seen in the illustrations are made of goat skin. Cowrie shells and beads are

individual is the entrance into manhood or womanhood, which is made with elaborate ceremonies of initiation.

The interesting group in Fig. 42 seems to portray girls during the period between initiation and marriage. The fringed head bands and the painted pattern on the legs of the girl at the left appear to be emblematic of this condition of life.

The iron working of the Akikuyu, admirably described in the book referred to, presents an interesting illustration in the history of metallurgy. It is a very primi-

The winning of this ore is the work of women and children. It is obtained by washing out the earthy material and concentrating the iron bearing sand by means



Fig. 44.—Akamba women.

tive practice and stands very close to the beginning of man's knowledge of metal. The ore is all gathered from the surface and consists of finely divided particles of magnetite, the products of disintegration

of water, just as the gold prospector obtains the free particles of gold in a pan. After this the ore is placed between layers of charcoal in a primitive furnace and reduced by means of an equally primitive



Fig. 45.—Akamba warrior with bow and arrow.

bellows. From the metal thus reduced the blacksmith, who is the most skillful craftsman among the Akikuyu, fashions such articles as spears, arrow heads, axes, wire, chains and personal ornaments, as well as the tools used in making these articles. The blacksmith's fee for making a spear is a goat, the goat being the ordinary medium of exchange and unit of value. The customer, however, always supplies the materials, that is to say, the lumps of iron, the charcoal and the beer, for custom prescribes that no blacksmith could execute a job without this last commodity, which is brewed from the juice of the sugar cane.

The production of iron is confined to one locality which seems to be surrounded by a great deal of secrecy.

The blacksmith may be called the only skilled craftsman, but pottery making and basket weaving are among the less accomplished industries of the tribe.

No native drawings have been found in Kikuyu land, but a great deal of artistic taste is shown in clothes, personal ornaments and the decorations of the dance shields.

Young girls choose their own husbands, but in each case the chosen man pays her father a certain number of goats. The price fixed by custom for a good wife is thirty goats or thirty times as much as a good iron spear.

The religious practices of the British East African tribes in general do not include temples or idols of any description. Nevertheless, religious observances possess certain strongly marked characteristics. Among the Akikuyu, these observances, according to the Routledges, depend upon the belief in a supreme God, to whom they address their prayers and make their sacrifices of goats. This divinity to whom they pray is called N'gai and appears to be very much like

the Wakonda of certain tribes of American Indians. He lives exalted and alone on Mt. Kenya and yet he is addressed also in the sun and in trees and in other objects of nature which inspire admiration and awe. Anything that is mysterious or beyond comprehension is called N'gai. In fact, N'gai, like Wakonda, seems to be the mysterious and invisible force that is back of things generally and that animates all nature.

A secret society exists within the tribe in which the principal rite seems to be the worship of a snake—a practice which seems to have nothing to do with the orthodox religion.

The medicine man combines the offices of physician, prophet and to some extent priest. He knows how to find out what is determined by fate and how to alter that determination. He can explain the causes of everything, including disease and misfortune. These are the work of evil spirits whose angry moods can be pacified only by rites which the medicine man knows how to prescribe. The services of the medicine man may be employed with equal propriety to cure the employer or to injure the employer's neighbor. The medicine men are said to be honest men who believe in the high position and dignity of their profession and in the efficiency of their medicines. There are said to be about five to every thousand of the population.

Unlike the Masai, the Akikuyu are adaptable and seem to furnish the elements out of which a permanent native population may be developed under European control and subject to European laws and regulations. Industrious and peaceable and farmers by tradition and profession it seems very probable that they will become more and more important as a factor in the economic progress of East Africa.

DAHOMÉY SONGS.

An unusual opportunity for adding a series of west African native songs to the Museum's collection of primitive music presented itself recently when the services of a young native from the Yoruba country, a part of Dahomey, were secured. Aside from an interesting personality possessed by Inquátwa, as our Dahomey man is called, which enabled the museum in collaboration with the Department of Anthropology to make extensive use of his knowledge of Dahomey customs, secret societies and economics, some score of war songs, love songs, nature songs, wedding dance songs, lullabies, tom-tom and zanza (keyboard) tunes were recorded by means of the phonograph to be transcribed and presented at a later date. Inasmuch as no music from this particular region has been published, this collection comes in very advantageously.

The tom-tom or drum tunes represent an interesting phase of African music. These, it seems, form a certain type of amusement among the men of a village, much as in this country people whistle or play mouth organs or banjos. The drumming is punctuated at intervals with yells and snatches of song. Another type of African lyric illustrates the deep figurative similes and parable speech so characteristic of native negro literature.

WEDDING DANCE SONG.

Wúdyū, wúdyū, awá.
Joining, joining! [Wedding!]
Don't fail to make us happy.
It is commanded [according to the faith].
Hand on hand, forever they are [the bride
and groom].

Wúdyū, wúdyū, awá.
Joining, joining!
Raise your spirits!
They are forever [the bride and groom].
As true as nature.

Wúdyū, wúdyū, awá.
Joining, joining!
Stand ye all around.
Don't waste any possible pleasure,
On such an occasion as this.
Wúdyū awá, wúdyū, wúdyū awá, wúdyū.

A characteristic feature of all classes of Dahomey songs is the endless dwelling on the main theme and iteration of the leading phrase, together with frequent repetition of meaningless words or syllables.

The following is a translation of one of the favorite war songs.

"Our people have no equal.
Our equal cannot be found.
Drink ye chilli.
We have the head.
It is a fair deal.
There is no mercy.
Ye búya!"

The chilli mentioned in this song is a wine made from the conquered chief's brains.

Supplementary information on some of the African musical instruments in the Museum collection was volunteered by Inquátwa. During all the meetings students from several of the advanced courses in the department attended to witness and practice the methods of field research.

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VOL. II

PHILADELPHIA, SEPTEMBER, 1911

NO. 3.

UNIVERSITY OF PENNSYLVANIA
THE MUSEUM JOURNAL



TLINGIT MASK. HEYER COLLECTION

PUBLISHED QUARTERLY BY THE
UNIVERSITY MUSEUM

THE MUSEUM AND THE SCHOOLS.

THE management desires to extend the educational influence of the Museum by a plan for systematic participation in the work of the schools of Philadelphia. The first step towards the realization of this plan is an invitation issued, in co-operation with the Board of Education, to the principals and teachers to bring their classes to the Museum in order that they may use the collections and the lectures that will be provided in connection therewith to illustrate those studies upon which they may be engaged relative to the history of man, and those that are concerned with the various peoples of the world. This invitation is extended in the firm belief that the observations which may be made by children while visiting the Museum under competent guidance and good instruction will give them a more faithful notion of the world's peoples than they can acquire from books alone, and will give greater zest to their reading. The impressions received from such observations are lasting and they serve the purpose of refreshing and stimulating the pupil to further observation and inquiry. The influences thus brought to bear on the young people are of the most humanizing character. The immediate result is to lighten the task of the schoolroom for teachers as well as for pupils and the ultimate result is to broaden the children's outlook upon the world and its inhabitants.

For the lower grades of the public schools the games and playthings of the American Indians and everything pertaining to the life of Indian children are used for purposes of illustration. The higher grades are shown how the different peoples of the world live and how the human race has lived in time past and at different stages of its development.

In case it may be the desire in individual instances to concentrate upon any given group of people or period of history each principal and teacher is asked to specify with regard to the particular phase of culture or the particular people about which the classes should be informed.

The toys, games, pastimes, arts, industries, the occupations in peace and war, the dress, ornaments and dwellings will be illustrated by the actual objects used in these several connections by the world's peoples, both ancient and living, and by lantern slides.

A special feature of the children's afternoons in the Museum will be the talk illustrated by means of the lantern, in the auditorium of the Museum. Lecturers specially trained and qualified to address children will be on hand on these occasions and will explain to the classes in the simplest and most direct language the subjects chosen for illustration.

BABYLONIAN SECTION.

A MAGICAL SKULL.

A UNIQUE object is contained in the Museum collections from Nippur—a human skull the surface of which is inscribed with a magical text. The skull is well preserved despite the fact that it has been broken into many pieces, happily well put together by the Museum's experts. Unfortunately the text is too much worn to allow more than a few words to be deciphered. Among these can be read "spirit," "lifith," "thou, spirit!", so that we are justified in supposing that the inscription is of the same magical order as that which appears in the magical bowls from Nippur, some of which have been described in previous numbers of the JOURNAL. A few names appear; one of them is a Mordecai ben Saul, a good Jewish name. The other

two names are Persian; one Gaspar is of interest as related to the Gaspar (Caspar, Jaspas) of the legend of the Three Wise Kings.

The use of a skull opens up some interesting vistas in magical arts. The human head and like gruesome objects are part of the common apparatus of the necromancer down to our own time. It represents his connection with and power over the spirits of the dead; gives him as it were a material *point d'appui* for his art. But it is a sacramental link not only with the dead but as well, by an easy extension of idea, probably based on primitive animism, with the world of spirits, especially those which are noxious. Hence the natural use of dead men's bones in the witches' brew. It is more difficult to understand the use of such uncanny things in the practice of love-charms; yet in the Greek erotic incantations the same objects are used, as in Theocritus' second Idyll, while an Arabic charm prescribes among the components of a philtre a piece of a broom taken from a cemetery,—making a rather disgusting love-potion! But a love-charm involves the incantation of nefarious spirits, of Hecate and her company, and so makes use of these animistic links with the spirit-world.

One particular phase of skull-magic is the art of the "speaking head," a human skull, which, properly prepared and enchanted, could utter oracles by its mouth. The Talmud has a reference to this art of "asking" a skull.* And the Sabians, an esoteric heathenish sect which survived in northern Mesopotamia till late in the Christian era, had, according to the *Fihrist* and other Arabic authorities, elaborate rites for the evoking of these horrible oracles.† The modern

necromancer's skull may be a reminiscence of those obsolete rites. Skulls appear to have been used also in the Greco-Roman sorcery.*

It may be observed that the skull has been regarded, among various peoples, as especially the seat of life. Probably this belief was due to the observation of the extraordinary durability of the skull, which, as paleontology shows, may last intact for millenniums. For the same reason certain vertebrae have been regarded as the connecting link between the body and the departed soul. Among the ancient Arabs the word for skull is also used of the soul,† and Dr. Speck informs me that the North American Indians preserve the skulls of the animals of the chase with the object of their easy reincarnation.

But it is through another category that we can best explain our skull and its magical inscription. It falls into that class of magic which is preventive of the evil eye, a large category which includes malicious spirits as well as human beings. Against this terror, one of the chief prophylactic agencies was the use of things horrible or obscene—as though the possessor of the evil eye had more sensibility than the user. The same idea underlies the grotesque and repellent funeral rites of primitive man, at least according to one school of anthropologists. Or is the practice a kind of homeopathy?

James of Edessa tells how the heathen Syrians used the dried human head as a prophylactic,‡ and the ancient Taurians, according to Herodotus, and some Caucasian tribes, employed the skulls of their

* Abt, *Die Apologie des Apuleius*, 141.

† Wellhausen, *Reise der arabischen Heiden*, 161, 164.

‡ Robertson Smith, *Religion of the Semites* 362.

* *Sanhedrin*, 65 b.

† See Chwolson, *Die Sabier und der Ssabismus*, ii, 150.

enemies in the same way.* In Italy a tiny skull-talisman is worn as an atropaic against the Jettatura or evil eye,† just as a skeleton-talisman is also regarded as

efficacious.‡ In the same way our skull with its inscription, both sign and charm, was regarded as a potent deterrent to the evil eyes of man and spirit.

JAMES A. MONTGOMERY.



FIG. 46.—Samoan Sika Clubs.

SECTION OF GENERAL ETHNOLOGY.

THE E. W. CLARK COLLECTION.

POLYNESIA.

AMONG the objects belonging to the same group and to the same collection as those from New Zealand, which were described and illustrated in the June number of this journal, are also some weapons and implements from Samoa, Hervey Islands, Austral Islands, Tonga, and one most

interesting club from the Marquesas, which will here be brought to your attention.

The islets mentioned above all belong, together with New Zealand and others, to the Polynesian group of the South Pacific, and to be able to duly appreciate the beautifully shaped and carved war-clubs, paddles, and adzes, which are here illustrated, it will be necessary to bear in mind some few facts about the people to whom they once belonged.

* Seligmann, *Der böse Blick*, ii, 141. † L. c.

‡ Elworthy, *The Evil Eye*, 340

Nearly all the islands on which they live are small. Some of them are mountainous with lofty peaks rising above the clouds, and, on account of their volcanic character, many of the mountains are broken into a thousand fantastic shapes of great beauty and wildness; other islands are low coral structures rising

America, and the Arctic, was, when it was first discovered, yet in the stone age. There is no reason to believe, if there had been metals on these islands that the Polynesians should not have discovered how to use them, but there *were none*, and when we admire the skill and dexterity with which their objects are shaped,



FIG. 47.—Mangala Island Ceremonial Adzes.

but some few feet above the ocean, and others again have a moderate elevation. Most of them have a profuse vegetation of coconut palms, breadfruit trees, taro, banana trees, and several other utilitarian plants, which make life among the Polynesians rather easy; but this whole area, together with Australia,

carved, and polished, we must not forget that it was done with tools of stone, bone, shell, teeth, or wood. George Turner, who lived with the Polynesians for a great number of years, tells that it might take them about one month to fell a tree with their stone axes. When we then remember all the work which is

lavished on each particular paddle or club, we easily realize that it must have taken a very long time to do it. Such an object when finished was not to the owner as to us a curiosity, through which may be traced relationships be-

that of the maker to his workmanship, or even as that of the inventor to his creations. They were children of his brain, shaped and modified to suit utilitarian purposes, carved and polished to gratify his artistic fancy and to bring forth the

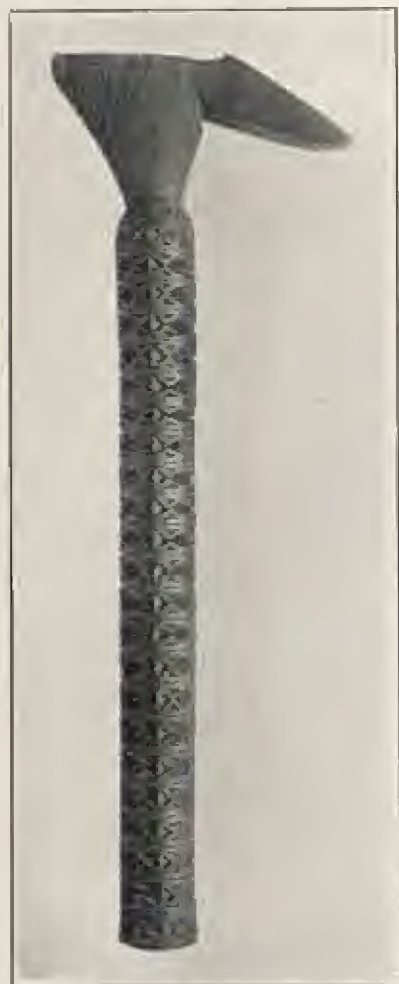


FIG. 38.—Mongain Island Adze.



FIG. 40.—Marquesas Club.

tween this island and that, and connections between these islanders and their native home, or consanguinity between them and the Redskins. No, the relation of the Polynesians to their implements was one of much greater intimacy, because in many cases it was like

admiration of his comrades. And to excite their admiration he had to adhere to their established conventions, to speak in their language so to say, and yet to bring forth a product in which the conventional form was intensified, improved, or after their taste made graceful. And

he knew how many sections he had made, and how many incisions in each, and how long a time it had taken him to do it, and finally he had grown accustomed to his products in use. All this, I have no doubt, would help him to understand the feeling of the Creator towards the earth he had made. It is said that He rested, and looked at His creation and saw that it was well done, and His affection towards it was great.

SAMOAN WAR AND STATE CLUBS.

Bougainville's expedition was the first to visit the Samoan islands. They called them "Navigators' Islands," because the people moved about so much in canoes. The origin of Samoa as a name is native, and came about in the following manner. The god of rocks had a son with earth. They called him Moa, which means center of earth. His father made rocks and earth and all things that grow, *saia Moa* or sacred to Moa till his hair was cut. When this happened the restriction was removed, but the name clung, and since then earth and rocks and things that grow have been called *saia Moa*, which is abbreviated Samoa. It was the year 1768 that Bougainville visited these shores, and afterwards several expeditions landed and finally in 1830 a missionary station was started. The Samoans did not like their visitors, and we know that in those times, when the head of a family prayed to the household deities, he begged: "Drive away from us sailing gods, lest they come and cause disease and death." But their deities were deaf to these prayers, and their civilization, customs, and beliefs had to flee before ours, until but very little is left, and of that little the objects that are here illustrated bear witness. The Samoan war club is about three feet long and made of very heavy, tough

wood. Both edges are sharp, the handle is well rounded and polished, and the whole weapon is very well adapted



FIG. 50.—Mangaia Island Adze.

to use. It is uncommonly void of decorations, and the only thing which we may regard as such is the cross and middle rib which runs through the whole length and

breadth of the blade, but the shape is light and pleasing.

Turner tells that the chief causes for wars in Samoa were murders, disputes about titles, or vanity (one chief wanting to show that he was mightier than

please," and "We have come, and here are the knives to cut us up with."

If the war was insisted upon the women and the children, the sick and aged were brought to safety and then no lives were spared. Wives of chiefs



FIG. 51.—Austral Islands Paddles.

another). Sometimes the parties arbitrated by paying fines, by carrying firewood, stones, and leaves, such as were used for roasting a pig, or by carrying bamboo knives. The two last acts signified submission, and were interpreted as: "Here we are, your pigs, to be roasted if you

and prominent men followed their husbands in war, carrying their clubs and tending them if sick or wounded.

Fig. 46 shows a row of Samoan state-clubs, carried on festive occasion. All these are beautiful in shape, but the decorations are remarkably simple and

stronglined for Polynesia, a fact which we will easily realize when we look at the very delicate carvings on the

when we actually handle the objects we find that the handles are made of solid wood, and though the carvings are



FIG. 52.—Austral Islands Paddle.



FIG. 53.—Austral Islands Paddle.

MANGAIA ISLAND CEREMONIAL ADZES.

Figs. 47, 48 represent four adzes from Mangaia Island in the Hervey group. The wonderfully carved handles look like lacework and suggest frailty, but

deep, pretty stout kernels are left, the heavy, black stone heads rest in grooves, and the symmetrical fastenings of native, plaited string hold them firmly. The wood in the handles is lighter than that

of the Samoan clubs, and yet not too light to make of these adzes quite effective implements, but in Fig. 50 we find a sample of the same type of weapon, in which size as well as decoration has been carried to such extreme as to actually

and combination. It will be seen that of the seven shown in the illustrations no two are alike. What significance these infinite variations had to the native mind is yet to be worked out; but we may take for granted, that

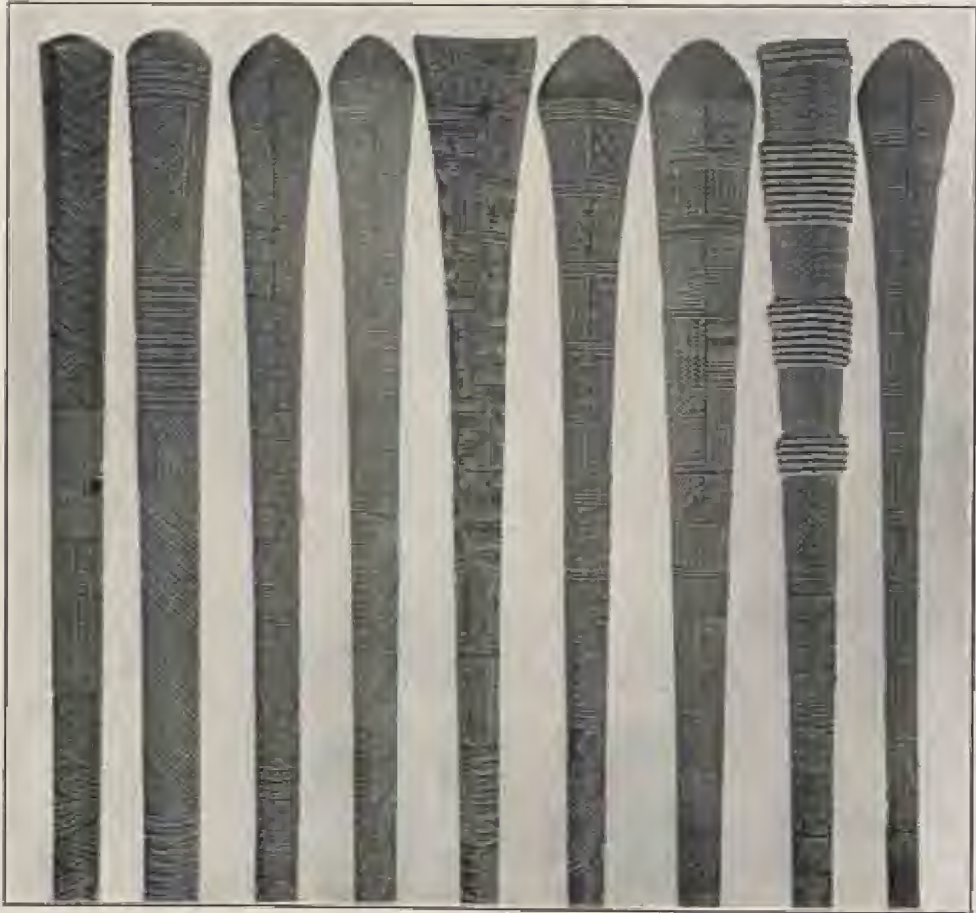


FIG. 54.—TONGA STATE CLUBS.

make it unpractical. Such adzes were used for symbolic purposes.

AUSTRAL ISLANDS PADDLES.

Most beautiful were the carved paddles of the Austral Islanders (Figs. 51, 52, 53), and if we look closely at the fine carvings and tracings we find an infinite number of variations in design

they were not there without reason. It would seem as if some of them had a local significance and mark the products of different islands of the group.

TONGA STATE CLUBS.

Nothing in the whole valuable collection may more strongly impress us with the wonderful cleverness and ability

of the Polynesians in handling their primitive tools than the objects shown in Figs. 54 and 55. The shapes are varied and the designs, though almost exclusively composed of straight lines, so impressively alternated as to make an unusually pleasing impression. These

which show how the whole life of Polynesia was imbued in a dignified manner with religious images, symbols and ceremonies.

MARQUESAS.

The specimen shown in Fig. 49 represents a characteristic paddle-shaped club



FIG. 55.—Tongan State Clubs.

handsome objects were obviously primarily designed as insignia of rank and can only exceptionally have been used for fighting. The whole club from handle to point is in each instance covered with carvings, and among the zigzag lines we may on many of them discover a crude human form as well as figures of stars, crescents, fishes, and tortoises.

from the Marquesas. It has, like almost every production of their artistic dexterity, a fantastically executed human countenance on either side of the blade. The wood is hard and tough, the whole object is highly polished and makes the impression rather to belong to the class of symbolic objects than to that of useful weapons. GERDA SEBBELOV.

AMERICAN SECTION.

MYSTERY PACKS OF THE AMERICAN INDIANS.

[The account of the Indian sacred bundles, used in the preparation of this article, has been furnished by Mr. M. R. Harrington, who collected more than one hundred bundles from the Indians.—Kerrou.]

A VERY unusual and interesting feature of the newly installed exhibits of the Heye Collection is the series of mystery packs or sacred bundles which have been selected for the public benefit from a much larger number comprising the greatest and the most complete collection of the kind in existence.

Presenting the unpretentious outward appearance of smoky packets, about eighteen inches in length, the real interest and importance of the sacred bundles becomes apparent only when they are opened and their contents exposed to view.

In the rapid transformation of Indian ideas and methods that followed the coming of the white man, worn out and discarded accoutrements of the hunt and the warpath, as well as those of everyday use, were replaced by others in a different style; but the contents of the sacred bundles, because of their associations, were carefully preserved, or, if newly produced, were made with strict regard to the old beliefs. That is why they are among the few surviving works of the Indian which represent him still unspoiled and peculiar to himself.

Old arts and crafts, otherwise perhaps lost to knowledge even of the Indians themselves, are often revealed by the opening of a sacred bundle; but more important still are the revelations thus afforded of the inmost soul of the Indian; of his spiritual needs and the scope and content of his religious experience.

On such a mystery pack the fortunes

in war or the happiness in peace of a whole tribe depended, for it contained the elements from which were compounded the success and the very existence of the tribe as well as of the individual owner. It is therefore no matter for surprise that the Indian of to-day, though the fortunes of war for good or for ill are no longer in his reckoning, and happiness in peace is his great affliction, should cherish these storied relics of the glorious past. According to his accepted belief they were bestowed on his people by the Manitos, who in order to make the gift, laid all nature under contribution.

The sun and the thunders gave of their strength; the beasts of the earth and the creatures of the air gave, each according to his kind. The bold eagle; the swift hawk; the night-seeing owl; the swallow, darting un hurt amid flying arrows; the sturdy buffalo; the tireless wolf; the sly weasel, approaching his prey by stealth; the snake, charming his foe with magic arts, and slipping unseen through the grass;—each gave an essential item to the Thing of magic.

The herbs also contributed a share of their enchantments.

The wonderful gift of the mystery pack came to no man merely for the asking, nor could a sacred bundle be made on any model however perfect. The essential knowledge came only in the Vision, not to all men but only to him who had proved his worthiness. In wild and lonely places, fasting and praying, the chosen suppliant received the Vision, which spoke to him according to his need and after the desire that was in his heart. It might be the love of a maiden for which the young man sought the aid of the unseen powers. Or the boon he craved might be the doctor's art, or the gift of prophecy; or, forgetting himself, he might ask for something that would bring happiness and renown to

his people; but the thing for which the Vision was most frequently invoked in pain and travail was to be made strong in battle. When the invocation was successful and the young man had his Vision, the Vision became his tutor. It told him how to magic himself into the possession of whatever gift he wished. Then, following his instructions, he went about preparing the magic bundle even as Medea gathered the enchanted herbs and strangely assorted odds and ends for the renewal of old Æson.* Thus have come into existence all these grimy heirlooms, which, handed down from generation to generation have gathered round them so much lore, which have been guarded with so much care and treated with so much ceremony.

The contents of an Indian mystery pack varied with the tribe and according to the instructions that the owner received from his Vision; nevertheless a war bundle is always found to possess certain well marked characteristics. Such a bundle gave the owner protection in

war by rendering him invulnerable to his enemies. Its purpose was, therefore, analogous to the witches' cauldron in Macbeth, which was apparently prepared with a pretense of protecting him from his enemies, in order to work his destruction.

"For, you all know, security
Is mortal's chiefest enemy."†

The charm which was prepared for Macbeth, although accompanied by a deceptive promise of security against all his enemies, purposely left him exposed to the one whom he most dreaded, and thus treacherously compassed his death in the battle with Macduff. The charm, according to his belief made him invulnerable, but the protection was incomplete. Some essential ingredient had been purposely omitted from the witches' charm. Thus also the Indian warrior, finding himself overtaken by the death to which he believed himself immune, ascribed the failure of his charm, not to any defect in his system of belief, but to some acci-

* The ingredients of Medea's sorcery were as follows: roots, seeds, flowers and acrid juices of plants gathered during nine days and nights, while she wandered alone and fasting in the mountains. To these she added stones from the East, sand from the shore of ocean, hoar frost gathered by moonlight, the wings and flesh of a screech owl, the entrails of a wolf, the skin of a water snake, the liver of a stag, the bill and head of a crow, and a thousand things without names. (See Ovid, *Metamorphoses*, Book VII.)

The witches' charm in Macbeth is still more familiar.

Round about the cauldron go
In the poison'd entrails throw.
Toad, that under coldest stone,
Days and nights hast thirty-one
Swelter'd venom sleeping got,
Boil thou first i' the charmed pot

*Fillet of a fenny snake,
In the cauldron boil and bake;
Eye of newt, and toe of frog,*

*Wool of bat, and tongue of dog,
Adder's fork, and blind-worm's sting,
Lizard's leg, and owl's wing,
For a charm of powerful trouble,
Take a hell-broth boil and bubble.*

*Scale of dragon, tooth of wolf;
Witches' mummy, maw and gulf
Of the ravin'd salt-sea shark;
Root of hemlock digg'd i' the dark;
Liver of blaspheming Jew;
Gall of goat, and slips of yew,
Sliver'd in the moon's eclipse;
Nose of Turk, and Tartar's lips.
Finger of a strangled babe,
Ditch-delivered by a drab,
Make the gruel thick and slab.
Add thereto a tiger's chauldron
For the ingredients of our cauldron.*

Cool it with a baboon's blood
Then the charm is firm and good.

(Macbeth, Act IV, Scene 1.)

† Macbeth, Act III, Scene 5.

dental omission on his part or failure to interpret aright the directions of his Vision.

The following is a partial inventory of the contents of an Iowa war bundle.

An otter skin.

A weasel skin painted green.

Various pieces of scalps.

Six eagle feathers.

Deer's hair.

Three snake skins.

Two buffalo tails.

Two ropes of buffalo hair.

Two miniature war clubs.

A wolf skin.

The tail of a white wolf.

The skin of a hawk.

Skins of four swallows.

The skin of a squirrel.

A human nose.

A pair of human lips.

A weasel skin stuffed with buffalo hair.

Four weasel skins.

Piece of an eagle's skin.

Three pieces of spotted fawn skin.

Two bags of red war paint.

A bag of tobacco.

Various packets of herbs.

The whole is wrapped in a double cover of buckskin, doubly bound with cords and thongs. Upon the outside of the cover are attached a war club and three flutes.

Many of these articles are variously decorated and wrought into objects appropriate for personal adornment. A common method of decoration employed on such objects as snake skins and the wing feathers and tail feathers of birds is the beautiful dyed porcupine quill embroidery for which the Indians have become famous.

Another form of mystery pack was the medicine bundle. Its object was to secure control over the evil spirits and other hostile principles of the universe which cause sickness and misfortune. The possession of such a bundle, therefore, secured for the owner health and long

life. It also enabled him to confer these blessings upon others. The following partial inventory of the Winnebago medicine bundle may serve to indicate the general character of this particular form of magic.

Three paws of the black bear used as bags and containing herbs. (The sole of one of these paws is painted red.)

A little bone tube stuffed with small feathers wrapped in the skin of an eagle's head and neck which, in turn, is enclosed in a pouch made from an otter skin.

An otter skin containing dried bird's flesh and a bunch of feathers and fastened at the mouth with a piece of eagle's skin.

Two cane whistles.

A paint bag in the form of a miniature embroidered moccasin with legging attached, containing herbs and closed by a bunch of buffalo hair.

Four snake skins.

A white weasel skin containing herbs and a bone whistle.

A brown weasel skin containing herbs.

Two snake's vertebrae.

A bone whistle.

A cormorant's head.

A woodpecker's head.

A black squirrel skin.

Two little wooden dolls tied together.

A dried eagle's claw clasping a little pack of herbs, and a feather dyed red.

(The last two articles are enclosed in a black squirrel skin which, in turn, is secreted in a woven sack.)

An eagle's claw clasping a pack of herbs, and a bunch of eagle quills painted red and green.

(The last two articles are contained in a decorated woven sack.)

An animal's eye.

A horse chestnut and a tooth enclosed in a woven sack.

A miniature wooden bowl and spoon.

Eight woven and five rolled pouches containing numerous dried herbs.

THE OSAGE WAR DANCE.

LITTLE MITANKE'S son had died. He died from drink, but his devoted father insisted on having the war dance performed in his honor. That was my great luck, because I was there and could witness it, and it may be the last war dance of the Osage nation; at least, they think so themselves.

The Osages are very conservative. Practically all the older men and all the women wear moccasins, leggings, and blankets; and in their daily life they religiously follow their own old conventions; but of recent years a great many of them have joined the modern heresy of the mescal cult. The war dance is one of the old religious observances, and the mescal eaters call it the devil's work. Partly on that account, and partly because Mitanke could not stand the expense, there was a great deal of talking back and forth.

At all feasts, religious ceremonies, and dances the Osages split up in their two component sections, *tshisho* and *hanka*. Now the section that wants to perform such a ceremony as the war dance must buy a man from the other side to help. So little Mitanke, who was a *tshisho* man, had to buy a *hanka* to mourn with him, and to help him conduct the ceremonies. For this he was supposed to pay the *hanka* a good horse. Mitanke chose his mourner and offered the horse, but after he had thus complied with the requirements of society, it was found out that the dead boy had mortgaged the horse for a drink of whiskey, and it took a long time before the matter was settled. But finally, when the law had been satisfied, and the war dance ultimately decided upon, everybody seemed glad. Even the mescal eaters declared that they liked their children to have an opportunity to see the customs and ways of their fathers.

They then held a council consisting of the relations of the dead boy, the chiefs, and other important men of the tribe. At this council a day was chosen for the mourning to start and it was decided when the war dance and final ceremonies should take place. Ten days' mourning was imposed upon Little Mitanke, because he had been drinking since his son died, and, as one of the chiefs told me, had not behaved as if he cared very much.

The council departed and the news of their decision spread like wildfire all over the Osage nation. The mourning was to start in three days, and to last for ten. At the end of that time the dance was to begin.

On the day specified for the beginning of the mourning we heard a heart-rending wail from Little Mitanke's house long before sunrise. It was repeated by all those in the village, who had lost relations or friends since the last war dance, and the whole camp seemed in one agony. Between day-break and sunrise a procession started from Mitanke's house. At its head was led a fine looking horse, decked with handsome blankets, and with gay colored ribbons braided in its tail. Next came Mitanke himself. His face was painted black, he was wrapped in a dirty white sheet and carried a tobacco pouch on his back, and a forked stick in his hand. Otherwise he wore nothing but a loin cloth and moccasins. After him came fifteen to twenty relations and other mourners, the women in the rear. All of them were crying and lamenting, the women apparently trying to out-do the men. They walked slowly the whole length of the camp road from Mitanke's house to that of his *hanka* man, who lived in a summer tent on the outskirts of the town, to the west. There they stopped. The horse was tied to a tree and relieved of its blankets and finery.

That was the payment to the hanka mourner. All the people of the procession went into the tent, and soon we could hear them chanting prayers, interrupted by occasional moanings and cries. These ceremonies lasted while the sky changed from yellow to reddish green and again to a dark blue with a scorching orange sun peeping into the tent.

Then most of the people departed. Shortly afterwards Mitanke and his hanka mourner were seen, tightly wrapped in their sheets, each carrying his tobacco pouch and forked stick. With their heads bowed they walked slowly in single file towards the west, the timber, and the creek.

For ten days they remained out. A little tent was built for them away from the others, where they could rest at night. But each morning before sunrise we heard their loud wailings, and from then till sunset they were not supposed to sit down, or to eat or drink. After sunset the women brought them water, in which to wash their faces and served them with a scanty meal.

While the men were mourning alone in the timber, the women of the family also got up each morning before sunrise. They made little cakes of ashes and mud and put them on their heads. When the men started mourning in the woods the women answered from their home, but directly before breakfast they washed themselves and were permitted to eat and drink.

All this while everything was quiet in the camp except for the wailings; but the tenth day was a busy one. All the people from the camp moved out on the west side of it. They built light summer tents of poles covered on top with branches and twigs with the leaves left on, and towards noon the Osages from all over the reservation began to arrive. The visitors, too, built their

tents on the new camp ground and at night quite a village had been built there. On the morning of the eleventh day a tent was put up still farther to the west and in that a council was held, and two additional mourners asked to volunteer. Then the chief mourners were called in from the creek; but it is claimed that after some few days' loneliness in the timber these men could talk with the animals, could communicate with the departed spirits, and have visions of the future world. They therefore did not wish to come back and resume their natural state, and the volunteer mourners must pay them each a horse and blankets to make them stop mourning. Then the new mourners stripped themselves of all clothing except the loin-cloths and moccasins. They smeared their faces and bodies with cinders and ashes. A pipe was given to each of them, and they went outside in the burning sun and afterwards they could not sit down, go into a house, or eat from sunrise till sunset as long as the war dance lasted.

The council then divided itself into hankas and tshishos. Each party formed a procession and, led by the nude mourners and the chief mourners in their dirty sheets, they went all around the new town. The hankas went east by the south side and came back west by the north, and the tshishos went west by the north side and came back by the south.

When the procession started out the mourners began to build two tents on the west side right opposite each other. They made great haste, and when the tents were ready a post was put up in front of each. These posts were covered with red cloth and each had a hatchet driven into it by the town crier. The raising of these posts started the war dance, and the *scalp-hunters* were sup-

posed to be gone. Each tent also had the American flag on a pole stuck in front of it.

Now the procession returned. The marchers went into the new tents, and the rest of the dancers in their usual dancing clothes with bells around their knees, and wearing a headdress of turkey bristles with an eagle's feather stuck in the middle, joined them there.

Two captains were chosen. They carried croziers covered with white feathers, and led the dance, always with an assistant by their side. The hankas, mounted on horses except for the nude mourners, who led the procession, came over to the tshisho tent. The hanka captain jumped off his horse and danced in front of the tent in a squatting position. He mounted again and the assistant dismounted and danced. After everybody had danced in turn the hankas returned to their tent and waited for the tshishos to repay the visit. After that, four hankas and four tshishos mounted their horses and each party, led by the nude mourners on foot, went in a trot all around the town. The Osages said that this party laid out the dancing road. When they came back to the tents they dismounted, made a squatting dance and entered. One hour later some few drum beats brought all the dancers out. Five to eight old men carried and beat the drum singing as they went. The flag preceded and after that came the dancers and finally the drummers. The hankas went east by the south side, and the tshishos went west by the north. At certain intervals the processions stopped. The drum beats called back the dancers, who started a curious horse-trot dance around the drummers. In the east they met. The nude mourners ran forward and circled around all the dancers. The flag-bearers took their stand on either side and so did the nude mourners, and the chief mourners in

their dirty sheets. The rest, in the space thus formed, danced around the drummers. They stopped seven times. This dance was repeated several times during the day. In the evening they had the sunset dance.

The hankas and tshishos met between the two tents. The dance was performed in couples and looked very much like the drill of our soldiers. The drummers stood to the east and sang. The dancers carried rattles and flutes. Some of them had flags and others carried spears or hatchets and a few had shields on their backs. After a while they formed a semicircle sitting in a squatting position and facing the west. Following the drumbeat each in turn got up slowly, making a curious sound like that of a bird, while rising. They then danced forward, throwing their heads back with an expression of defiance in both features and motions, and went out in front of the circle. Several of the dancers gave the war-whoop, whereupon they again returned and squatted in their former places. When all had gone through this performance, they returned to their tents. The older men were then permitted to go home, while the young men had to sleep in the warriors' tents.

Before daylight the next morning, the nude tshisho mourner began to pray. Then the chiefs and head men began to assemble, and they all chanted a low prayer. The mourners and captains on each side formed a line and with wailings and prayers, rattling and blowing their flutes they walked round the town. Half an hour later they had the sunrise dance, which differed but slightly from the sunset dance of the evening before. During the day they danced as on the day before, but on this day the tshishos were the leaders and they danced the tshisho dances. They concluded with the sunset dance in the evening, but after

dark the warriors and dancers promenaded round the town.

The third day and part of the fourth were much like the first two. But later on the fourth day a tent was again erected on the west side of the two warriors' tents. Both the hankas and the tshishos went over there and for a long time nobody disturbed them. The mourners stood in front of the tent and from time to time their wailing was heard. At other times loud prayers and chants were heard coming from the inside of the tent. The ceremony itself I could not observe, but the Osages said that they were preparing the body of the enemy. After a while drum beats were heard and the dancers one by one danced out towards the west with the feather-clad croziers in their hands. When they were done, the crowd scattered, and a woman was seen carrying a bundle on her back (the dead enemy's body, they said) down to the tshisho camp where she entered. Then they made the usual round of the town following the drum, but at each stopping place they formed in line while one or more of them performed the sunrise and the sunset dance, giving the impression that they were scouting or looking for the return of the scalp hunters.

At two o'clock the last dance was performed and the balance of the afternoon was devoted to ceremonies. The men in the hanka tent threw off their shirts and smeared their bodies with black. They prayed. From time to time foot races and horse races were performed, seemingly to divert their minds while they waited. Finally at about 5 o'clock three men mounted on horses without saddles came dashing up to the tent of the hankas and gave to the chief mourner something on a stick. That was the scalp. In former days, it might be a scalp of anybody who was not

an Osage. Now they borrow some hair from some white people, or take the scalp of an animal. Shortly after this the dancers started to wash off their paint and put away their ornaments. Everything was quiet till a procession of men with the mourners dressed up in brand new clothes carried the feathered croziers out towards the west. They prayed and had a small ceremony whereupon the old squaw town-crier took the croziers and carried them still farther off towards the west.

That evening there was great ado in the camp. The women went singing from tent to tent, and the young men kept drumming, singing and dancing, and in many places the camp fires kept burning brightly almost till daylight.

Most of the fifth day was taken up with ceremonies, which ended in the evening with a dance in which the women took part. But already that afternoon a great many of the people had broken up and left, and on the afternoon of the sixth day the place was almost deserted and looked bleak and forlorn after all the life and bustle that had so recently given color and animation to the landscape.

GERDA SEBBELOV.

THE MUSEUM COURSE OF LECTURES.

The success of the course of lectures given at the Museum last year on "The History of Mankind" and the general approval of the members as expressed by their attendance at this course in large numbers has made it seem well to make arrangements for a similar course during the present season. In arranging such a course the Museum's object will be to maintain a standard that will secure the continued approval and support of the members.

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GENERAL ETHNOLOGY SECTION.
THE E. W. CLARK COLLECTION.

NEW CALEDONIA.

MELANESIA is the name given to a group of islands in the South Pacific lying directly to the west of Polynesia. The inhabitants of Melanesia differ both in culture and in physical characteristics from the Poly-

ings have invaded this area, and also, that the picturesque crudeness of the Melanesian decorations is rare in Polynesia. Their tools and materials were the same. The Melanesians as well as the Polynesians had no metals, and both had their chief material in the tough woods so plentiful on their isles.

Captain Cook was the discoverer of the New Caledonian islands, the



FIG. 56.—New Caledonian Clubs.

nesians, some of whose productions were described and illustrated in the last number of the *MUSEUM JOURNAL*.

New Caledonia is an island in Melanesia lying very close to the Polynesian line, and from early times the Samoans and Tongans (Polynesians) have paid it frequent visits. It is therefore no wonder that their cultures are greatly intermixed, but much more surprising that very few of the delicate Polynesian carv-

French explorer d'Entrecasteaux completed the exploration of them, and it is from him that we have the first information about the inhabitants. They were a warlike people. George Turner, who lived in the South Pacific for a great many years, tells us that in New Caledonia war was the rule, peace the exception. It was therefore no wonder that life and customs were to some degree imbued with ideas connected with war.

When a boy was born the priest cut his umbilicus on a stone from Lifu that the youth might become stone-hearted in battle, and before him he held a bowl full of a black fluid, that the boy might become courageous and go to battle on pitch-dark nights. Thus from the very beginning the little fellow was conse-

When a New Caledonian was publicly condemned for some misdemeanor, he was clad with garlands of red flowers. On his legs and arms were hung shells and blossoms, his face and body were painted black and blue and he had to dash forward, jump over the rocks into the sea, never more to appear.



FIG. 57.—New Caledonia Clubs.

crated to war. Later he was trained to fight. Boy fought with boy, and learned to discern the approach of an enemy at a great distance by listening to the earth. When he finally grew up and became a warrior he was cruel beyond measure both towards enemies and towards those of his own upon whom he had an opportunity to visit punishment.

But especially towards their enemies the New Caledonians had great opportunities to exercise brutality, because there were, as Turner says, "Wars, wars, wars, incessant wars!" They fought with clubs, spears, and slings, and no life was spared. Judging from the old reports the people of these islands must have been among one of the peoples on earth who actu-

ally enjoyed human flesh. A captive they tied to a tree, and before his very eyes they dug the hole and kindled the fire which a minute later would transform his body into a meal. The women went along to battle, and it was their duty to rush forward, when an enemy fell, to

fasted, if they could not get sufficient hands.

White men, the New Caledonians said, were the spirits of the dead; they were supposed to bring disease and death, and to kill them was particularly desirable,



FIG. 58.—New Caledonia Jade Axe.



FIG. 59.—New Caledonia Jade Axe.

pull his body to the rear and prepare it for the oven. When a chief was roasted everybody had to have a taste of his flesh, even the little children. The hands were the choice bits, and they were sacred to the priests who sat at a distance and prayed for victory, and

Also in their prayers their warlike spirit showed itself. Before going to battle they prayed to one god for the eye, that they might see the spear as it flew towards them; to another for the ear, that they might hear the approach of the enemy, and to a third for the feet,

that they might be swift in pursuing the enemy; for the heart, that they might be courageous; for the body, that they might not be speared; for the head, that they might not be clubbed, and so forth. The greatest desire of a New Caledonian was to be praised as a great warrior, and finally when he had ended his earthly career, spears were set at his head, a thrower fastened to his forefinger, and a club laid on top of his grave, so as to be sure that he should not want weapons in the battles of the next world.

Coming from a people whose whole life was so entirely filled with ideas of killing it is no wonder that we find clubs and axes primarily suited to this purpose and in which the matter of decoration has become secondary. In Fig. 56 we see a row of New Caledonian war-clubs with well-rounded handles, excellently suited for a good grip, with heavy heads suggesting fatal blows, but almost entirely void of decorations. Also the picks, Fig. 57, are primarily made for a practical purpose. They are shaped like the head of a heron or crane and were used for both war and husbandry. Among the inhabitants of Loyalty Islands the same kind of weapon was used, and it is hinted, that it there served a special purpose which may not have been foreign to the New Caledonians. The Loyalty Islanders practised incision of the scalp as a cure for headaches. They slit open the scalp, scraped the cranial bone till they reached the brain, let a few drops of blood escape, hoping to "let out" the pain, and then closed the aperture with a sea shell or coconut shell and let it heal. But ever after, this formed a weak point on the skull, and it is intimated that this birdlike weapon was shaped so as to be able to give the most deadly blow on the weakest point.

These objects are beautifully polished and all have a decorative eye, which helps to suggest a realistic origin.



FIG. 60.—New Caledonian Jade Necklace.

The ceremonial axes shown in Figs. 58, 59 have a characteristically crude human head carved at the point where blade

is fastened to handle. The blades are large pieces of beautiful green jade. The handle of the one is wrapped with flying-fox fur braid, which was used extensively as currency. The other is wrapped with sennit (cocoanut fibre) and at the bottom is half a cocoanut shell fastened with flying-fox fur braid and containing shells or beads which rattle with the smallest motion.

Also the beads in Fig. 60 are made of green jade. Each bead is hand carved with tools of stone and wood, and represents a huge piece of work. They were used as a necklace and the string contains 166 beads.

GERDA SEBBELOV.

AMERICAN SECTION.

SNOWSHOES.

OCCASIONALLY we find some article invented by man in a relatively primitive state, with the strain of necessity upon him, of such great perfection that modern ingenuity has been unable to improve upon it though it may continue to do service either as a useful device or as a means of sport and pastime.

The snowshoe belongs among the devices of this class. Though it has by no means outlived its usefulness, it cannot be considered as a serious factor in the present progress of civilization.

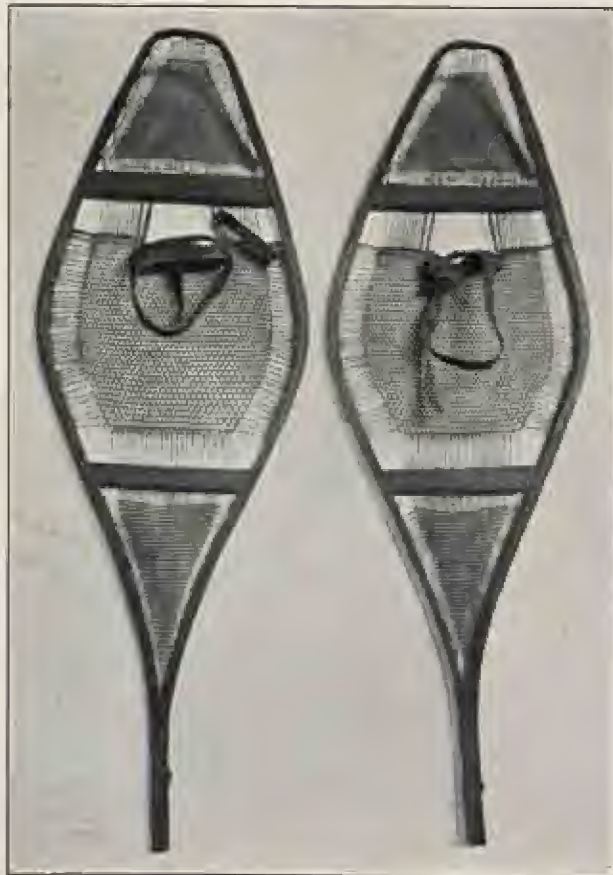


FIG. 61.—Canadian Club Snowshoes of the Huron type.

The position it occupies is intermediate between the serious work of life and its lighter side of sport. Already in the minds of most people it is associated

there is nothing to remind us that the snowshoe, indispensable minister to our enjoyment, has played its part in man's desperate struggle for existence and that

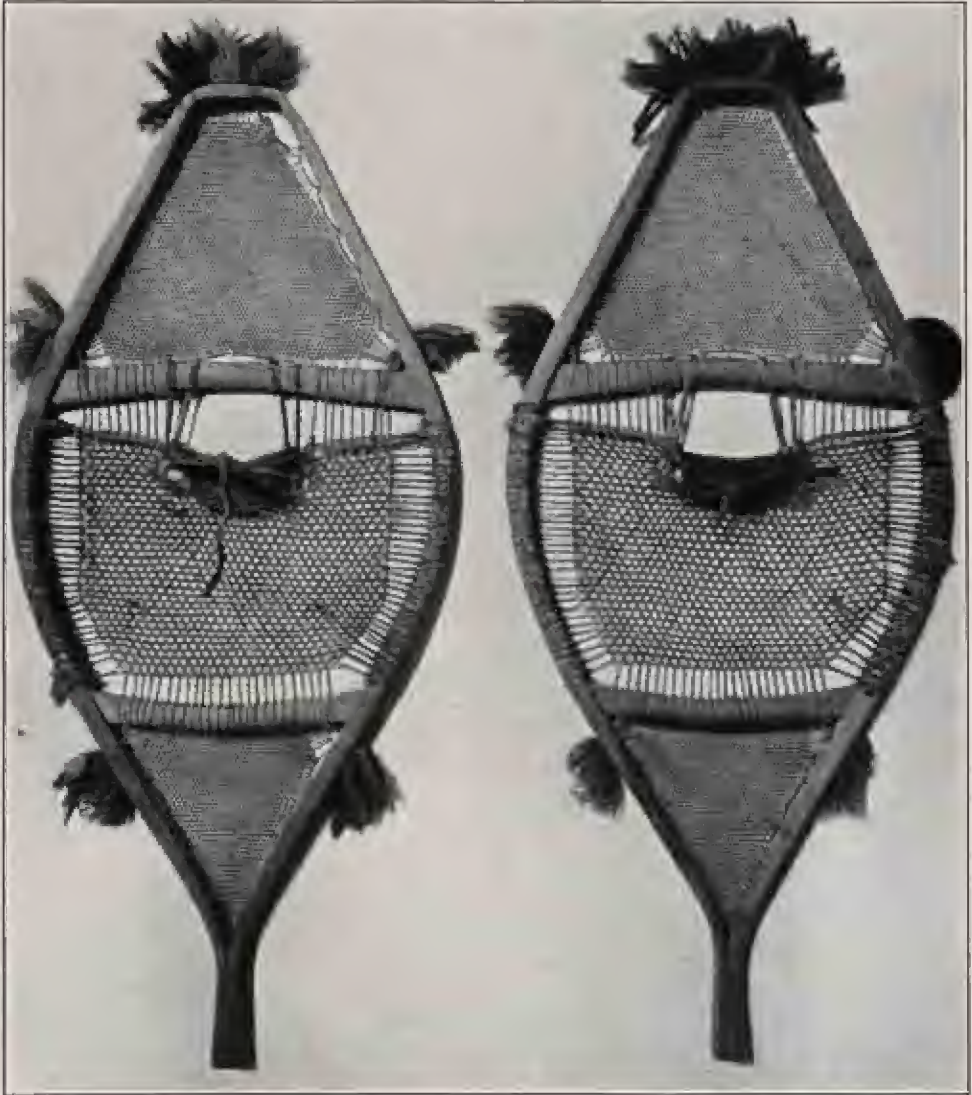


FIG. 62.—Snowshoes from the Têtes de Boule Indians of Quebec. Heye Collection.

only with play, an association that seems very much in keeping with an object of such light and graceful structure as the snowshoe. When we repair to our glittering northern winter playgrounds

it claims a place in the history of the arts of travel and transportation.

The snowshoe made of a web of meshes stretched on a framework of wood is so characteristic of the North

American Indian that it might almost be regarded as his own peculiar property. In no other part of the world except perhaps in Northeastern Siberia did this invention reach nearly the same development as in North America. In so far as the netted snowshoe is concerned that is employed in the winter sports in Canada and the United States, it is purely Indian origin and borrowed directly from the tribes of the North-east. Among these tribes especially, the

ficiently large surface. The difficulty was to find something light enough and small enough so as not to interfere with his motions, and as in all contrivances, it has probably taken a series of inventions to reach the perfection that we now enjoy. Fig. 63 shows a Ute snowshoe, that may not deviate very strongly from the first one made, though we have still cruder examples without any claim to regularity and with only the rudiments of netting. This type of snow-

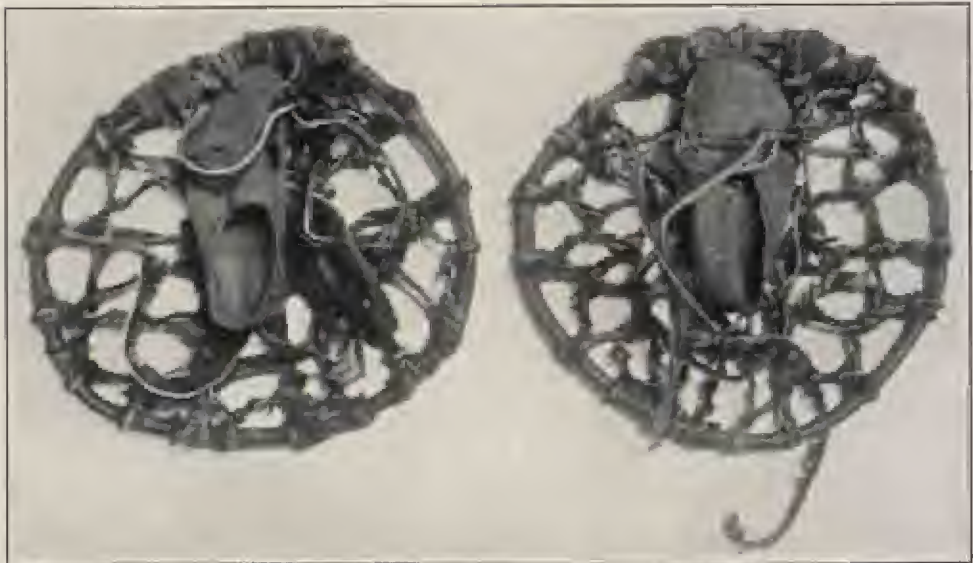


FIG. 63.—Ute Indian Snowshoes for mountain climbing, Utah

snowshoe attained a very high state of perfection.

It was devised by the Indian under conditions that made increasing demands on his ingenuity. Perhaps it was in pursuit of game that he first met with the large snow fields, and when he found himself thus confronted he had but two alternatives, to invent something that would support his weight on the yielding snow, or to turn back.

No very intricate device was necessary to distribute his weight on a suf-

ficiently large surface. The difficulty was to find something light enough and small enough so as not to interfere with his motions, and when he found himself thus confronted he had but two alternatives, to invent something that would support his weight on the yielding snow, or to turn back. The shoe is still used by the Piute Indians in mountain climbing and when caught in a snow storm. Fig. 64 shows a type of snowshoes used by the Piute Indians in mountain climbing and rumors say that the owners hold them sacred and take care that they be not polluted by the glance of women, for which reason these shoes can never be taken into camp.

Through the long series shown in the illustrations we may observe a rapid development of intricacy, and of skill in

handling the materials. These consisted of a frame of wood, bone or antler, and a netting made of strips of skin. The kind of wood or the nature of its substitute for the frame as well as the particular animal skin employed in the netting, naturally depended on the local supply and therefore on the natural products of the country inhabited by the tribe.

gine effort to produce artistic forms, and a well marked pleasure in the playful mastery of technique. The snowshoes of the Hurons and the Montagnais for instance combine in an admirable way the greatest utility and a high degree of elegance.

There is a natural belt for highest development of the snowshoe stretching from the northern part of New York



FIG. 64.—Parle Indian Snowshoe. Hays Collection.

The various snowshoes in the University Museum, ranging in their geographical distribution from Alaska to Labrador and from the mountain tribes to the people of the plains, disclose a number of different technical methods in their construction and in the manipulation of the material that make them interesting to the student of man. We can observe, together with a groping after the most practical results, a gen-

State to within the Arctic Circle. Farther south the snow fall is too slight to serve as a stimulus to a full development, and in the extreme north the snow rapidly freezes and becomes hard enough to sustain the hunter without it.

The outer frame or rim is made sometimes in two pieces locked together at the toe and heel. This method is employed by the Alaskan Eskimo and the Northern Athabaskan tribes (Chipe-

wyan, Louchoux, Kutchin, Khotana, etc.). Among the Algonkians and other eastern peoples however the frame is made of a single piece of wood bent to the approved shape. In either case it is strengthened by cross pieces of wood or stout strips of rawhide. There are

In the spring of the year, when the snow melts, the netted snowshoes become clogged with slush, which renders the weight fatiguing. Wooden snowshoes, well suited for this season of the year, are then sometimes substituted

Throughout the north, from the Mic-



FIG. 83.—Alaskan Eskimo Snowshoes.

usually two of these cross pieces, though occasionally only one is used, and in some types the number is increased to four. In applying the babiche to the framework the Indian has displayed much ingenuity and in the articles of finer mesh has shown his fondness for decorative effects.

innes of the Maritime Provinces to the Naskapi of Labrador, and the Eskimo of Alaska, southward to the latitude of the Great Lakes the snowshoe is made after different models, each tribe following its own approved pattern. Definite types prevail in each tribe and thus it becomes an easy matter to

identify any tribe from its snowshoe. Some varieties are, however, found in common throughout the whole area. A closely woven mesh is best for dry, powdery snow, a coarser mesh for crusted surfaces, a long narrow frame with upturned prow is better for track-

finest specimens come from the northern Algonkians (Naskapi, Montagnais and Penobscot), and from the Hurons. All these tribes inhabit a country where the deep snows of winter caused the Indians to attain a high degree of excellence in their means of winter



FIG. 66.--Penobscot Indian Snowshoes. Heye Collection.

ing or running in a level open country, while a flat broad frame excels in mountain journeying, or traveling through forests.

In the University Museum collection are a number of types and varieties of snowshoe which show its distribution and specialization. Unquestionably the

transportation. Even the Eskimo, in a more truly arctic region, have less need of perfecting the snowshoe because with them the fallen snow does not lie as deep, nor remain as soft as in the sub-arctic latitudes. In the prevailing Naskapi and Montagnais or Labrador type, known popularly as the "beaver-tail,"

the frames are of spruce and the netting of caribou rawhide. Farther south in less mountainous territory dwell the river tribes, the Malisits of New Brunswick, the Penobscots of Maine and the Hurons and Abenakis of Quebec. The snowshoes of these tribes are longer, narrower, and have lengthened tail-

to see the men filling in the network of the frames and passing the time with smoking and story telling.

The snowshoe is attached to the foot by means of an ankle loop and a toe thong. The Indian readily puts them on without the assistance of his hands, slipping his foot through the ankle loop



FIG. 67.—Malisit Indian Snowshoes. Heye Collection.

pieces or trailers. Those of the Northern Athabaskan tribes are still longer and narrower with upturned prows. All of these peoples use a bone or wooden netting needle about three inches long tapering at both ends with the eye in the center. It is one of the interesting sights of Indian village life in the north

and adjusting the toe thong by a swift and dexterous movement of his moccasined foot. The method of attachment leaves the heel entirely free, the weight of the shoe as it is lifted and brought forward at each step being borne by the toe. Thus the prow of the snowshoe only is raised at each step; the

heel is left to trail along the snow. In traveling over the snow the Indian walks with a long swinging gait and a swaying motion of the body.

To the welfare of hyperborean peoples generally snowshoes are absolutely necessary. They could not procure food without them. They could not pro-

wind sweeps down over their country, and their faces and fingers freeze almost stiff on the bleak winter day; they have to outface these difficulties or go hungry. Many a storm has tried their vitality and no one has kept count of those who were defeated in the struggle for existence before the return in the spring.

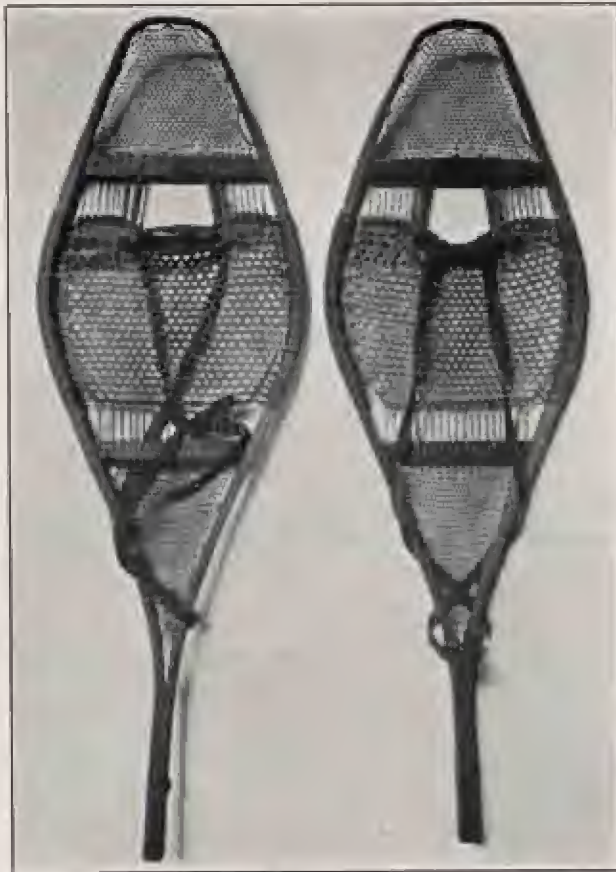


FIG. 68.—Huron Indian Snowshoes. Heye Collection.

cure clothes without them, because the animals that furnish these people with furs must be captured in winter, and the ground to be hunted is of great area. So some of these northern tribes go out in the fall and build their birch bark houses wherever the hunting ground seems promising, and when the north

It is under these conditions that the snowshoe does its service to man and under these conditions it has had its admirable development.

In Europe the invention that corresponds to the American snowshoe is the Norwegian ski. The relative merits of the two are often debated by those who

are accustomed to use the one form or the other, and each has its advocates.

There is no doubt that the long, swift, upturned wooden runner lends itself to performances of a kind for which the American snowshoe is, by no means adapted either by design or by practice.

The last distance mentioned is the record jump, the others are common enough. The record time in racing with the ski is $15\frac{1}{2}$ miles in 2 hours and 7 minutes, over open, level country.

But compared with the Indian snowshoe the ski is unwieldy, and for tracking



FIG. 69.—Athabascan Indian Snowshoes from the interior of Alaska

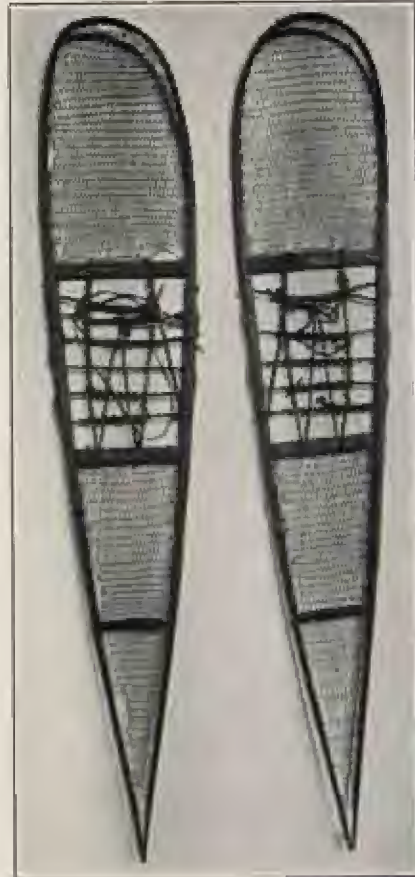


FIG. 70.—Athabascan Indian Snowshoes from the Yukon River.

In open country the ski has advantages over the snowshoe, and especially on sloping ground, where the straight, smooth runner allows the sportsman to perform those long glides and those extraordinary flying leaps in which he launches himself into the air from the take-off for a jump of 50, 75 and even 135 feet.

through timber or over loose snow all authorities are agreed that the snowshoe is very superior to the ski. In the American snowshoe, moreover, the qualities of lightness, strength, gracefulness, ingenuity of construction, and facility in use, are combined to make it an article of special merit, remarkably adapted

to its purpose. As though not content with this achievement the Indian essayed, in the more perfect examples, to render his workmanship still more attractive to the eye and more pleasing to the mind by working into the fabric of the mesh, a decorative pattern which exhibited at

colored worsted after the manner seen in Figs. 61 and 67.

Although it is quite true that the racquet form of snowshoe is to be assigned in its development to the American Indian and although the ski is of Scandinavian origin, both types are now widely used

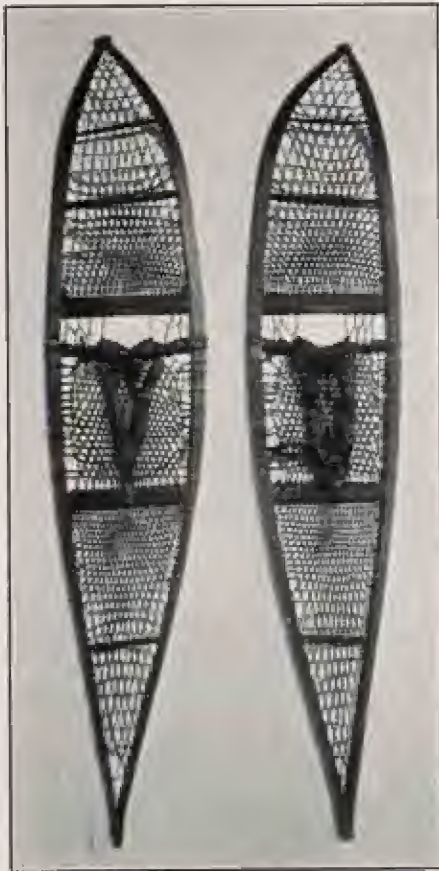


FIG. 71.—Chipewyan Indian (Athabaskan) Snowshoes.

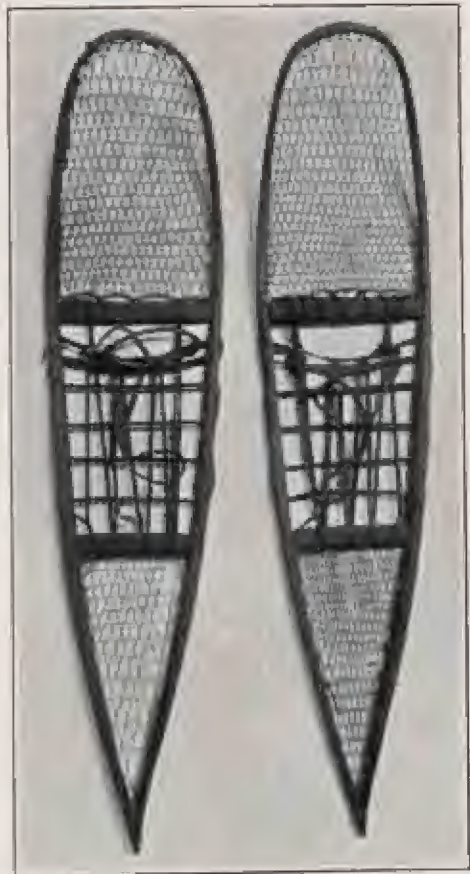


FIG. 72.—Athabaskan Indian Snowshoes from Northern Alaska.

once his desire to please and his skillful mastery of technique, an exercise of his faculties in which the Indian craftsman took special delight. Examples of this form of decoration may be seen in Figs. 73 and 77. Or he embellished the wooden frame with tufts of dyed moose hair, or

by different peoples. Both forms are best known in connection with sport, but in France and in Italy the ski is employed in military manoeuvres, and in the Andes it is used by mail carriers. In Canada the snowshoe is used by the Royal Northwest Mounted Police, by fur

traders, trappers, couriers, and travelers who have occasion to traverse in winter the vast tracks that are still remote from railroads and other more modern methods of communication.

In Canada the snowshoe clubs contribute largely to the interest in snowshoeing as a sport and serve to stimulate the practice of this pastime. Snowshoe

racing forms one of the principal sports of these Canadian clubs.

Other forms of snowshoes have been used historically by different peoples of the world. They were usually made of skin, and in Ancient Greek literature we are told that the horses of the Armenians were equipped with snowshoes of this kind.



FIG. 73.—Montagnais Indian Snowshoes, Quebec.

Heye Collection.

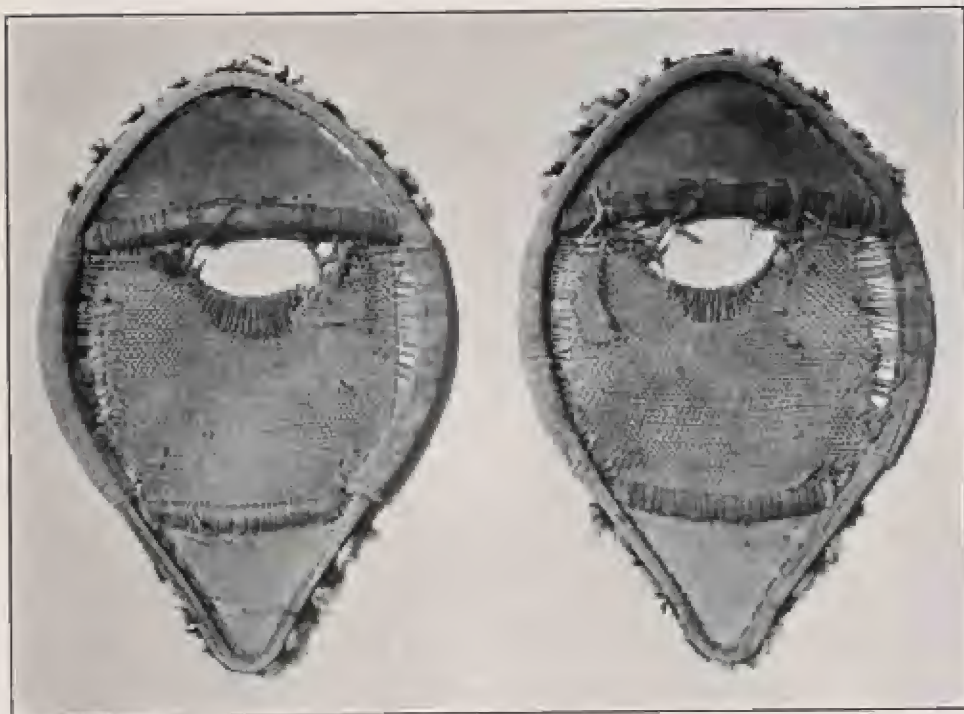


FIG. 74.—Montagnais Indian Snowshoes. Beaver tail pattern. Heye Collection.

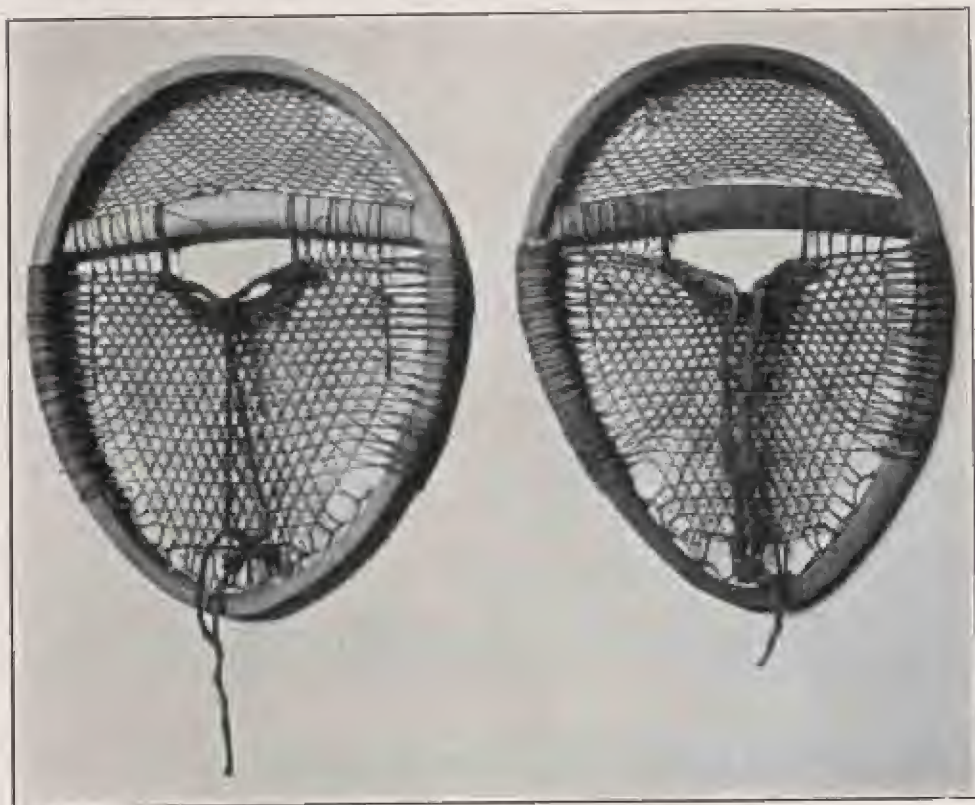


FIG. 75.—Montagnais Indian single bar Snowshoes. Heye Collection

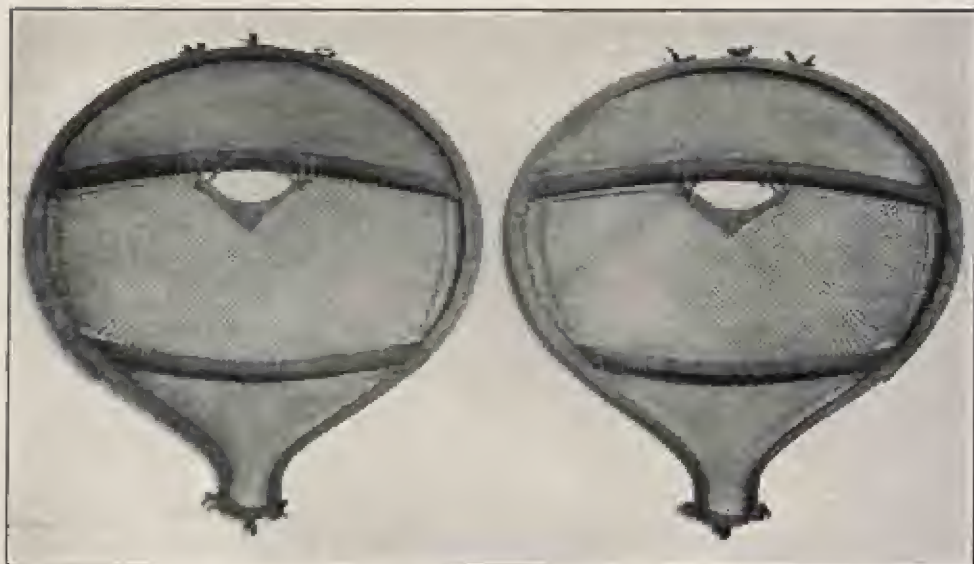


FIG. 76.—Montagnais Indian Snowshoes. Heye Collection.

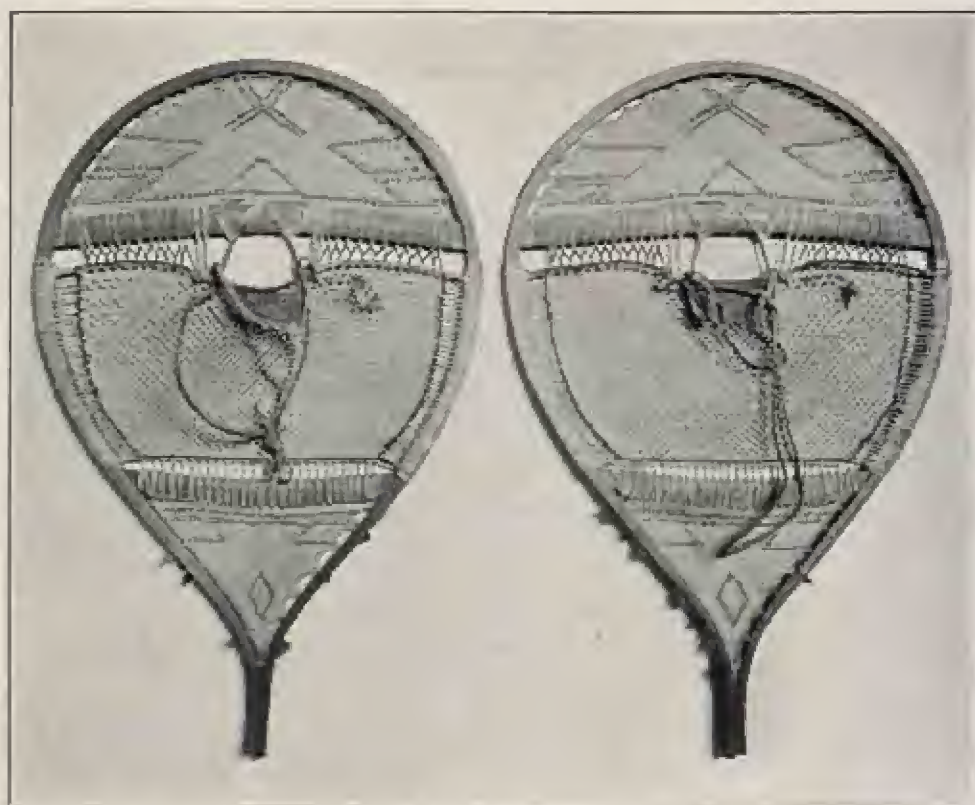


FIG. 77.—Snowshoes from the Montagnais Indians in Eastern Canada. Swallowtail pattern. Loaned by Frank C. Schoonover.

1911 NOTES.

ACCESSIONS.

AN ethnological collection comprising 402 specimens from New Zealand, Australia and the Islands of the South Seas. This collection, purchased through Mr. Herbert L. Clark, is to be known as the E. W. Clark Collection.

A set of twenty-seven terra cotta figurines illustrating the costumes of different peoples of India, presented by Mrs. Richard L. Ashhurst.

Tapu cloth from the Sandwich Islands, presented by Miss Juliana Wood.

Samoa war club, presented by Mr. Leonard Myers.

Twenty ethnological specimens from Greenland, presented by Mrs. Richard L. Ashhurst.

A collection of 825 ethnological specimens procured from the Eastern Algonkian tribes of the United States and Canada added to the George G. Heye Collection.

Five painted Indian buffalo robes by purchase.

A collection of fourteen pieces of Araucanian Indian silverwork by purchase.

Twelve ethnological specimens from the Alaskan Eskimo by purchase.

Old Indian war club presented by Mr. John Moss, Jr.

Model of Ojibway canoe from Northern Quebec, presented by Mr. A. P. Wiedersheim.

An ethnological collection comprising 2500 specimens from the Indians of the Northwest Coast added to the George G. Heye collection.

A collection of ninety-seven sacred bundles and costumes from Indian tribes in Oklahoma added to the George G. Heye collection.

Eight cases of pottery and other small antiquities from the Soudan Government, forming the final consignment to the Museum of the finds at Buhen.

A collection of over five hundred fragments of Coptic, Greek, Arabic and Demotic papyri purchased in Cairo through Mrs. C. C. Harrison.

One hundred pieces of Coptic, Greek, Arabic and Demotic papyri, presented by Mr. John F. Lewis.

An Egyptian stone lintel from the Museum of Fine Arts in Boston.

A Hathor head in fayence, found in the ruins of Luxor, by purchase.

An Egyptian mummy from Mrs. L. A. Barakat.

A ceremonial vase from the ruins of a Greek Church in Messina, presented by Chev. Baldi through Dr. Allen J. Smith.

A life-sized seated marble statue of early Roman date representing Bacchus of Hercules, purchased through Mrs. Joseph Drexel.

A collection of twenty cameos, seals and coins from Mrs. William Pepper.

VARIOUS ACTIVITIES.

Field work during the year was confined to some minor phases of investigation in North America.

During the spring, Dr. Frank G. Speck went to Northern Quebec where he obtained a considerable collection representing the material culture of the Montagnais Indians living in the vicinity of Lake St. John. During the summer, Dr. Speck visited the Penobscots where he obtained additional material for his monograph on the ethnology of that tribe.

Mr. Wilson D. Wallis, who was last year Harrison Fellow in Anthropology, spent the summer among the Micmac Indians of New Brunswick and Nova Scotia, making collections, taking measurements and studying their ethnology. He also obtained a number of phonographic records of songs.

Miss Gerda Sebbelov spent the summer among the Osage Indians in Oklahoma on behalf of the Museum, carrying on special inquiries relative to the ceremonial life of the Osage.

Mr. W. C. Orchard was sent to North Dakota to study the house construction of the Sioux.

Doctor Speck and Mr. Wallis have made a preliminary report on the so-called Moors of Indian River, Sussex County, Delaware. During the investigations which they have been carrying on in that community they have been successful in collecting a body of information which is capable of being developed into an instructive record of a community made up of the amalgamation of three distinct races. In this case the three elements are known and for two of these elements specific anthropological data may be claimed. For the third these can be given only in very general terms. The people locally called Moors in Delaware are a mixture of White Europeans, African Negroes, and Nanticoke Indians. The proportion in which these three enter into the mixture cannot be determined with accuracy.

The descendants form to-day an exclusive community of about 700 souls on Indian River with a smaller community of about 300 at Cheswold, Kent County, Delaware. Each community maintains a strong consciousness that preserves its identity and keeps the families of which it is composed from intermarrying with either the whites or the negroes. Physically, the members of these communities are very well formed, their mental qualities are good and they are well-to-do.

To what extent the exclusiveness of these communities is due to Indian ancestry it is impossible to say, but Doctor Speck thinks that this feeling may be due to a dominating Indian tradition. They

possess an abundance of folk-lore and superstitions, but whether these will be found to present characteristics which will associate them with either the Indian or the Negro it is not now possible to say. Magic and witchcraft are extensively practised and a belief in the specific medical virtues of various plants forms a body of local information that makes a suitable subject for further study.

Such a community as that on Indian River obviously offers interesting material for the study of one of the far-reaching aspects of modern anthropological research, namely the effects produced by race amalgamation. Here we have an example of a community which derives its origin from three races, and which is completely self-sustained, which rests its claim to exclusiveness on a feeling of social superiority and which presents all the essential marks of a separate ethnic and social group.

The study of this community has its bearing on such fundamental human phenomena as physical variation, tribal prerogative, clan consciousness, race sensibility and the sociological significance of exclusive property in folk-lore and belief.

Doctor Speck finds that the esoteric tendency which has set up barriers to protect the group against the action of outside influence is not inconsistent with a breadth of view which provides schools of a high standard and a liberal provision for the education of the youth. The moral tone of the community is approved by all observers and the general discipline is clearly of a high order.

Miss Gerda Sebbelov was appointed Assistant Curator of the Section of General Ethnology.

Dr. Edith H. Hall was appointed Assistant Curator of the Mediterranean Section.

The Maxwell Sommerville Collections have been rearranged during the year and put in order. A new exhibit of the Buddhist collection has been arranged and the objects nearly all placed under glass. The gem collection has received a general classification and is now exhibited with appropriate labels.

In the American Section, a number of new cases were installed during last summer and the old cases condensed. In this way, a large amount of additional exhibition space has been provided, but, at the same time, the overcrowding of some of the rooms must be apparent to everybody.

The installation of the new cases provided for an extended rearrangement of the collections in the American Section. One entire hall, next to the lecture room was devoted to the Heye Collection from the North Pacific Coast and a large part of the adjoining room to a collection of mystery packs of the American Indians.

Seven hundred and eighty-seven volumes have been added to the Museum Library by purchase and the collection of books has been further enlarged by the receipt of five hundred and sixty-five exchanges. Upwards of four hundred books were taken out by readers during the year.

The collections in the Museum continued to be used extensively by the classes in Anthropology and to a considerable extent also by the classes in other departments of the University, especially by classes in history and those in architecture. The classes from the School of Industrial Art also made use of the collections, on appointed afternoons, for practice in drawing and water-color work.

At the beginning of the present school year, the Museum, in coöperation with the Department of Education in the City, sent out invitations to the number of about 4000 to the principals and teachers of the public schools, suggesting to them the advantages which might be afforded by the Museum for illustrating the subjects taught in the schools and for improving the methods of instruction.

On March 4th a reception was given at the Museum to Dr. Albert von Le Coq of Berlin.

On May 3d a reception was given at the Museum to Dr. Albert M. Lythgoe, of the Metropolitan Museum, and to Mrs. Lythgoe, who, at the time, were guests of the President.

On May 16th, a reception was given at the Museum to the members attending the Third National Conference on City Planning.

PUBLICATIONS.

The following publications have been issued during the year 1911.

Babylonian Section.

"Sumerian Hymns and Prayers to God Ninib," by Hugo Radan.

"Babylonian Hymns and Prayers," by David W. Myhrman.

Egyptian Section.

"Bula," by D. Randall-MacIver and C. Leonard Woolley.

"The Merottic Inscriptions of Shabûl and Karanôg," by F. Ll. Griffith.

American Section.

"Ceremonial Songs of the Yuchi and Creek Indians," by Frank G. Speck.

"The Tahltan Indians," by G. T. Emmons.

LECTURES.

A course of fifteen lectures has been arranged for the season, beginning on December 9th and ending on March 30th. The complete list of lectures is as follows:

December 9.—Mr. Algot Lange. "In the Amazon Jungles."

December 16.—Prof. Clifford H. Moore, of Harvard University. "The Roman Aqueducts, or the Water Supply of Ancient Rome."

January 6.—Miss Florence A. Stone, of Athens. "Thessaly; A Visit to the Monasteries in the Air and the Vale of Tempe."

January 13.—Miss Florence A. Stone, of Athens. "Among the Cyclades; Delos, Paros, Thera. The Miraculous Virgin of Tenos."

January 20.—Mr. Sidney Dickinson. "In Maoriland; A Journey in New Zealand."

January 27.—Mrs. Joseph Lindon Smith. "The Natives of Modern Egypt."

February 3.—Prof. W. Max Müller, of the University of Pennsylvania. "The Damming of the Nile and the Doom of Philae."

February 10.—Prof. Clifford H. Moore, of Harvard University. "The Transformation of Pagan Temples into Christian Churches."

February 17.—Mr. Joseph Lindon Smith. "The Discovery and Opening of the Tomb of the Parents of Queen Tiy."

February 24.—Prof. Walton Brooks McDaniel, of the University of Pennsylvania. "In Sicily with Cicero and Verres."

March 2.—Mr. Henry E. Crampton, of the American Museum of Natural History. "In the Wilds of British Guiana and Brazil."

March 9.—Miss Florence A. Stone. "Athens, Ancient and Modern."

March 16.—Mr. F. S. Dellenbaugh. "A Glimpse of Zuñi and the Hermit Tribe of the Grand Canyon."

March 23.—Mr. A. C. Parker, of the New York State Museum. "The League of the Iroquois. A Recent Study of An Ancient Indian Empire State."

March 30.—Prof. Clifford H. Moore, of Harvard University. "The Eleusinian Mysteries in Ancient Greece."

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All classes of members are entitled to the following privileges: Admission to the Museum at all reasonable times; an invitation to any regular reception given by the Board of Managers at the Museum; invitations to all lectures given at the Museum; the Museum Journal; copies of all guides and handbooks published by the Museum, and free use of the Library. In addition to the privileges to which all classes of members are entitled, sustaining members and fellows receive, upon request, copies of all books published by the Museum.

Publications of the Museum

- Transactions of the Museum, Volumes I and II, \$2.00 each.
 Journal of the Museum, issued quarterly, single copies, 25 cents.
 Gournia, by Harriet Boyd Hawes, 1905, \$25.
 Pachacamac, Report of the William Pepper Peruvian Expedition of 1895-97, by Max Uhle, \$10.00.
 The Excavations in Assyria and Babylonia (with 120 illustrations and 2 maps), by H. V. Hilprecht, 1904, \$2.50.

Babylonian Section

Series A. Cuneiform Texts

- Vol. III: Sumerian Administrative Documents from the Second Dynasty of Ur.
 Part 1, by David W. Myhrman, 1909, \$6.00.
 Vol. VI: Babylonian Legal and Business Documents from the Time of the First Dynasty of Babylon.
 Part 1, chiefly from Sippar, by H. Ranke, 1906, \$6.00.
 Part 2, chiefly from Nippur, by Arno Poebel, 1909, \$6.00.
 Vol. VIII: Legal and Commercial Transactions, dated in the Assyrian, Neo-Babylonian and Persian Periods.
 Part 1, chiefly from Nippur, by A. T. Clay, 1908, \$6.00.
 Vol. IX: Business Documents of Murashu Sons of Nippur, dated in the Reign of Artaxerxes I, by H. V. Hilprecht and A. T. Clay, 1898, \$6.00.
 Vol. X: Business Documents of Murashu Sons of Nippur, dated in the Reign of Darius II, by A. T. Clay, 1904, \$6.00.
 Vol. XIV: Documents from the Temple Archives of Nippur, dated in the Reigns of Cassite Rulers, with complete dates, by A. T. Clay, 1906, \$6.00.
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 Part 1, by Hugo Radan, 1908, \$6.00.
 Vol. XX: Mathematical, Metrological and Chronological Texts from the Temple Library of Nippur.
 Part 1, by H. V. Hilprecht, 1906, \$5.00.
 Vol. XXIX: Sumerian Hymns and Prayers to God Ninib.
 Part 1, by Hugo Radan, 1911, \$3.00.
 New Series
 Vol. I, No. 1, Babylonian Hymns and Prayers, by David W. Myhrman, 1911, \$3.00.

Egyptian Section

Eckley B. Coxo Junior Expedition to Nubia

- Vol. I: Areika, by D. Randall-MacIver and C. Leonard Woolley, 1909, \$5.00.
 Vol. II: Churches in Lower Nubia, by G. S. Milham, 1910, \$5.00.
 Vols. III and IV: Karanog, The Romano-Nubian Cemetery, by C. Leonard Woolley and D. Randall-MacIver, 1910, \$20.00.
 Vol. V: Karanog, The Town, by C. Leonard Woolley, 1911, \$5.00.
 Vol. VI: The Merottic Inscriptions of Shablul and Karanog, by F. L. Griffith, 1911, \$10.00.
 Vols. VII and VIII: Buhen, by D. Randall-MacIver and C. L. Woolley, 1911, \$20.00.

Anthropological Publications

- Vol. I, No. 1: Ethnology of the Yuchi Indians, by Frank G. Speck, 1909, \$2.50.
 No. 2, Ceremonial Songs of the Yuchi and Creek Indians, by Frank G. Speck, 1911, \$2.50.
 Vol. II, No. 1, Takelma Texts, by Edward Sapir, 1909, \$2.50.
 Vol. III, No. 1, Excavations on the Island of Pselra, Crete, by Richard B. Sanger, 1910, \$5.00.
 Vol. IV, No. 1, The Tahltan Indians, by G. T. Emmons, 1911, \$5.00.

UNIVERSITY OF PENNSYLVANIA

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Mrs. Lucy Wharton Drexel

We record with very deep regret the death of MRS. LUCY WHARTON DREXEL which took place suddenly on January 25th. MRS. DREXEL, who has been known for many years in New York as well as in Philadelphia for her public benefactions, has been intimately associated with the University Museum throughout its entire history. When it was first planned, MRS. DREXEL was one of the small group who were interested in the movement and who enabled these plans to be realized. She was a member of the first Board of Managers and has served on many of its committees. Her wide interest in matters of art and her great sympathy with all measures providing for the advancement of the arts and the liberal education of the public enabled her to render services of the greatest moment to the Museum. Always true to her ideals and sensible of the highest interests of the community, her benefactions were marked by rare discrimination. The DREXEL collection of Greek and Roman marbles, her gift to the University Museum, if they were placed in any Museum in the world would be considered a notable feature of its collections. The series of fans which bears her name is one of the best in the country. It is through these collections that MRS. DREXEL's name is best known in Museum affairs, but her other benefactions to the institution have been no less liberal.

In all its undertakings the Museum has had in MRS. DREXEL a wise and good friend and a generous benefactor. The loss which has been sustained in her death is keenly felt and deeply deplored.

BABYLONIAN SECTION.

ONE OF THE OLDEST BABYLONIAN
TABLETS IN THE WORLD.

By GEORGE A. BARTON,
Professor in Bryn Mawr College.

THE University Museum possesses one of the oldest Babylonian tablets in the world. There are but four other objects which can be compared with it. These are the Blau Monuments, consisting of two small votive objects now in the British Museum, an archaic tablet in the E. A. Hoffman Collection of the General Theological Seminary, New York, and a tablet first published by Professor Scheil, which is now in the possession of a gentleman in Baltimore. These four objects, together with the tablet of the University Museum, form a class by themselves. The nearest approach to them is a text found at Telloh considerably below the level of Ur-Nina, published by Sarze, but this text does not begin to approach so closely to picture-writing as the five objects just referred to.

The tablet to which this article refers, bearing the catalogue number 16105 has been in the Museum for many years. It was purchased for the Museum by Mr. J. H. Haynes from Arabs in 1896, at the time when he was in charge of the expedition of the University conducting the excavations at Nippur. I saw the tablet for the first time in February, 1911, when I was permitted to copy it. The text is a purely ideographic one, written for the greater part in real pictographs. Purely ideographic Sumerian texts are, as every Assyriologist knows, difficult of interpretation. The successful interpretation of such a text depends upon a knowledge of the genealogical history of the cuneiform signs. Several years of investigation given to the preparation of two volumes on *The Origin and Development of Baby-*

lonian Writing, now in press, have enabled me to give the text of this interesting tablet at least a tentative interpretation, and to call attention to some of the more important contributions which the tablet makes to the study of ancient Babylonian writing. The discussion of more intricate technical points would be out of place in the present paper.

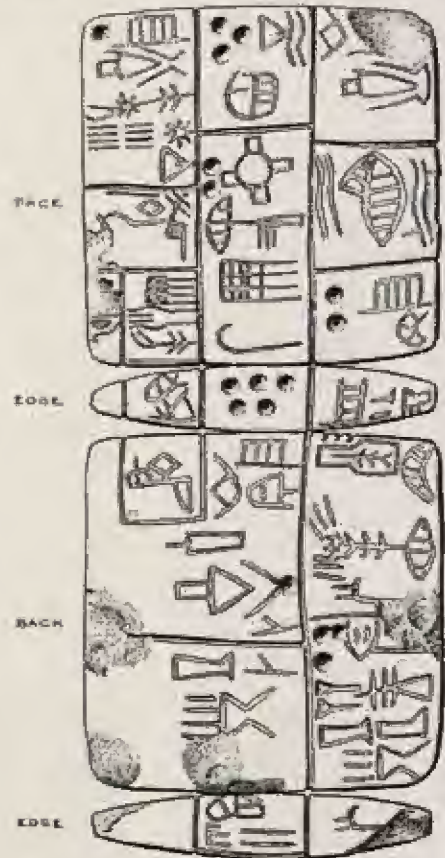


FIG. 1.—Ancient Babylonian Stone Tablet.

This valuable treasure of the University Museum is inscribed on both sides and both edges. It differs from all tablets with which I am acquainted in that the three columns continue from the face over the edge on to the back of the tablet, while two of these three columns are further continued on to the other edge. At the third division of the first

column, either the tablet, which is of a greenish-black stone, had a defect, or the scribe made a mistake and found erasure difficult, for at this point he has set the edge of the column in from the edge of the tablet about a quarter of an inch.

The form of this tablet, like that of the E. A. Hoffman tablet, which is also of stone, is fashioned in imitation of a clay tablet. Both are much thinner at the edges than at the center. These stone texts accordingly bear witness by their shape to the fact that, although no writing on clay as old as they has survived, clay tablets were used in Babylonia at an earlier date. Had this not been so, these tablets of hard stone would not have been fashioned in the form which plastic clay so easily assumed. The tablet is $2\frac{1}{4}$ inches long, $2\frac{3}{4}$ inches wide and $\frac{3}{8}$ inch thick at the center, tapering towards the edges.

The following is a tentative transliteration and translation:

TRANSLITERATION.

- I. 1. I BUR GAN XI-GIN-MI-SAL
2. UŠU MULE
3. SA-NE GIN
4. TUK (?)
5. MUD.
- II. 1. XXX SAL-A-DUL
2. II BUR GURIN KI NUN-SABAR
3. V BUR
4. GAN UDU-SAG UŠ DUQ-QATAR
5. GUB TAR NISAG DUG
6. AŠ TAB
- III. 1. E . . . XI
2. A-UIXU-A
3. II BUR GAN AZAG
4. EN-NE (?)
5. SAM AZAG SAG GID (?)
6. III BUR SAG . . . DUMU
NUN-DU-DU NISAG
7. ŠER (?)

TRANSLATION.

- I. 1. 1 *Bur* of land (belonging to) Khiginmi-Sal.
2. At sunset the locusts he drove out;
3. their curse he established.
4. He received (?)
5. a family [or group]
- II. 1. of 30 slave-girls.
2. 2 *Bur* of fruit-land (belonging to) Nunsabar.
3. 5 *Bur*
4. of land (belonging to) Udu-sag.
The man broke a jar,
5. he stood, he cut open a sacrifice, a word
6. of cursing he repeated;
- III. 1. it went out. . . . , verily
2. against the caterpillars.
3. 2 *Bur* of land were purified
4. (belonging to) Enne (? ?);
5. the price of purification is a tall (?) palm-tree.
6. 3 *Bur* of a field (belonging to) son of Numdudu; he offered a sacrifice;
7. he made (it) bright (?).

The tablet records the means taken to rid various tracts of land of a plague of locusts and caterpillars. The last line, "he made it bright," refers to the ceremonial purification of the field.

In the first column, case 1, the figure of a jug resting on supports is a different picture from any previously known of a well known symbol of a jug resting on a stand. Col. III, case 1, presents still a different picture of it.

Col. I, case 2, contains two new pictographs: the sun entering its subterranean passage, and a locust. Col. I, the edge, presents a new and difficult sign. It is a kind of helmet with a cape at the back,

in the manner of a modern Arab *kafiyeh*. Two signs were previously known which had descended from a somewhat similar head-dress, though neither of them indicated so complex a picture. I have interpreted this new picture by one of these.

Col. I, 5, contains the most complete picture of a bird and egg yet found. The oldest form previously known, lacked the bill of the bird, so graphically pictured here.

Col. II, 5, and III, 6, contain the only pictures of hour-glass-shaped altars with a fire burning on the top that have yet been found in Babylonian writing. Such altars are frequently pictured on the seals.

Col. III, case 2, contains a rude picture of a caterpillar. It affords the explanation of a sign, the origin of which had long puzzled scholars. The sign means, "worm," "vermin," "flea," etc., and the early forms are clearly derivable from this picture.

Col. III, case 5, contains an older picture of a palm-tree growing out of irrigated land and blowing in the wind than any previously known. It confirms a conjecture of Professor Hounel and the present writer, that the later sign for palm-tree originated in such a picture; (cf. *Old Testament and Semitic Studies in Memory of William Rainey Harper*, II, 235).

AMERICAN SECTION.

THE DEVIL DANCE OF THE APACHES.

AMID the rugged foothills of the Wichita Mountains, on the military reservation at Fort Sill, Oklahoma, lives a remnant of the famous Geronimo's warlike band of Apaches. Still held as nominal prisoners of war under the watchful care of the United

States Army they are gradually finding their way to the "white man's road." Geronimo, the crafty leader of so many successful raids, fell victim to the white man's habits a few years ago, and with him died much that belonged to the old life of his people; for the new leader, young Asa Daklugie, has turned his back upon the past and is looking forward to a new day.

Most of the old ways have been abandoned; the picturesque native costumes have given way to overalls, boots and flannel shirts; the hunt has been supplanted by the raising of cattle, while farming in a small way ekes out the none too generous rations received at the fort.

The little and extremely airy frame houses furnished by a paternal government are occupied and appreciated when the land lies baking under a torrid summer sun, but when the icy "Northers" come sweeping down in the fall the Apaches are glad to take refuge in "wicki-ups" and tents erected in sheltered places in the timber along the creeks.

At first the Museum expedition, supported by Mr. George G. Heye, which was in my charge, could find little in the way of specimens to illustrate the old arts and customs; the Indians said they had nothing; but soon baskets and domestic utensils were shyly offered for sale, then such things as ornate saddle bags, the characteristic Apache moccasins with up-turned toes, and other articles of costume began to appear. After a while we were able to secure the curious charms of abalone shell, worn as amulets to prevent disease, and little figures of the Thunder God carved from the wood of a lightning-struck tree, kept to ward off thunderbolts.

One day a stalwart Apache led me aside and exhibited a great pair of branching, deer-like horns, cunningly carved from wood, and attached to a

tight fitting buckskin mask or cap, intended to pull down over the face and tie about the neck. "A fine specimen for the Museum!" I thought.

When questioned about the price our Apache's face grew solemn and he discoursed at length on the great sacredness

was closed at a more reasonable figure, and I drove away with not only the treasure itself but the legend of its origin as well.

The story he told me was very similar to the tales related by many other tribes to explain the origin of masks; even the



FIG. 2—Apache Indian in Devil Dance Costume.

of the mask, and what might happen to him if he sold, then mentioned a price that was exactly what we would expect from one of Geronimo's marauding partisans. Taking my turn, I called his attention to the mask's inferiority, and expressed a doubt as to whether I should buy it at all. But finally the bargain

Iroquois and Delawares of the East have like traditions:

"A long time ago," he said, "an Apache named Kantanro was hunting near a big mountain out in Arizona, when he saw a strange being come out of the rocks, a creature with no ears or nose, but which had great horns upon its head.

He was badly frightened, but the spirit called to him and told him not to be afraid, and offered to help him. The hunter stopped to listen, and was told just how to make and use these masks. 'Do as I tell you,' said the spirit, 'and I will give luck to your girls when they

sick can come, and the dancers cure them, for they have the spirit's power. When all is over the girl is no longer a child, but a woman. The white people call it the 'Devil Dance' but it has nothing to do with anything bad. Perhaps they think the dancers look like



FIG. 3.—Apache Indian Girl in Costume of Devil Dance.

arrive at womanhood, will cure your sick, protect you against storms, and help everybody.'

"So when a girl reaches the proper age her parents get up a big feast in her honor and we dance several nights wearing the masks and horns, which look like the spirit the hunter saw in the mountain. At this time people who are

the spirit who will take care of them when they die."

As may be imagined I was eager to see the dance, but no chance came until the following summer, when an Indian brought me word that the great event was to take place.

Leaving Lawton, the nearest town, in the gathering dusk, we drove out past

Fort Sill and down into the shadows of the Medicine Creek bottoms. Finally fording the limpid stream, we came out into a large clearing where many tents, visible in the flickering light of numerous fires, revealed the presence of a large camp.

In the middle a round space had been cleared of brush, and here various Indians were busily piling up two great heaps of logs, one to start the dance fire, one to replenish it.

Everywhere was laughing and talking. Here were heard the complex sounds of the Apache language, one of the most difficult in phonetics of any Indian language with which I am acquainted. There, from groups of sheeted visitors, the plain, matter-of-fact Comanche, and from still other groups were heard the singsong, drawling tones of the Kiowa tongue. Altogether the scene was a noisy one, and it would be hard to imagine one more picturesque.

A modern touch was given to the scene by a flourishing soda-water booth, where some enterprising soul was doing a land-office business in pop and lemon sour.

At last the log pile was lighted and the blaze, mounting into the still summer air, made the great circle bright as day. A loud snapping sound drew our attention to a group of Indians who, squatting about a dry cowhide, had begun to belabor it, in unison, with stout sticks, and soon the measured throb of a tom-tom joined the din, followed by a burst of wild, weird song.

A hush of expectancy fell upon the audience, and all eyes seemed trying to pierce the darkness beyond the fire's bright circle of light.

Suddenly an owl-like "ho ho ho" was heard faintly from the black void to the east, then louder and closer, until

a file of awe-inspiring demons came trotting into the circle, crowned with great branching horns, from which hung bundles of sticks that clattered at every step, and which surmounted round, hairless, earless, noseless heads, with circular mouth and eyes. Bodies were painted with black and white, while round each waist hung a fringed kilt heavily hung with metal jingles. The feet were shod with typical Apache moccasin boots, and each hand bore a sword-like or a cross-like wand. Briskly making the circuit, they trotted out to the four directions, paid their respects to the four winds with a "ho ho ho," then turned back again to the circle.

All at once the music changed to a thrilling rhythmic dance tune, full of wild, wolf-like cries—and then began the most wonderful dance it has ever been my fortune to witness.

Gyrating and prancing, the dancing figures went through the most strenuous movements, contortions, bendings, writhings; every man exactly in time, every step in unison. The great waving horns, the sweat-streaked, laboring, painted bodies, the violent clatter of the pendant sticks, seemed as if calculated to produce a terrifying effect. From somewhere appeared the little brown maiden in whose honor the dance was held, dressed in a beautiful suit of fringed buckskin, with a great disk of abalone shell pendant upon her breast, where also hung the little bone tube through which she must drink during this, her initiation into womanhood. With a companion, she joined the dance, moving about the fire inside the circle of horned figures, and there she kept it up, in her heavy buckskin costume, that hot July night, until a very late hour when all was over.

M. R. HARRINGTON.

THE NORTHWEST COAST COLLECTION.

AN ethnological collection from the Indian tribes of the Northwest Coast of America, constituting a part of the George G. Heye collection never before exhibited, has recently been

The difference is due to the fact that the group of tribes scattered among the islands and along the shores and inlets of the Pacific from Washington northward and westward to Controller Bay in southeastern Alaska have developed a form of culture peculiarly their own.



FIG. 4.—War knives of the Tlingit.

thrown open to the public view in the hall adjoining the Museum lecture room. The visitor is struck at once by the difference between the specimens shown here and those in the other Indian collections; they seem as if they were products of another continent.

including a style of art, a system of heraldry, in fact a way of living, differing widely from anything known among Indians elsewhere. While it is true the ideas underlying most of their peculiar arts and customs may be found in simpler form among tribes in other parts

of the continent, these people have developed them to such an extent and in such an individual and peculiar way that they seem to be a people apart.

Their country is blessed with a mild climate, thanks to the Japan current, and the growth of timber, mainly evergreens, is particularly heavy and luxuriant. Chief among the trees is the cedar, here attaining gigantic proportions, the wood of which splits easily and is easily carved—at the same time retaining some degree of durability.

The many fiords and inlets swarmed with fish, each kind in season, and shell-fish of many kinds were found in abundance along the shores, while the woods teemed with terrestrial game. Thus the people were furnished a good living with small effort, and found time to develop the strange conventional art and the complex institutions, traditions and myths for which they are noted. They became, with the cedar at their command, by far the best wood carvers on the continent, as well as notable weavers and workers in copper. A well defined system of caste and nobility was in full operation, and the wealthy had even acquired the luxury of slaves—captives taken from other tribes and held in bondage. Commerce and trade had reached a degree of development rare in aboriginal America. Heavy laden freight canoes bearing products for exchange were continually plying up and down the shores; while the simple natives of the interior were visited yearly by traders from the coast tribes in search of furs. Oblong plates of copper, embossed and engraved according to conventional rules, were used to represent a certain amount of property, and formed a near approach to real money; while furs, skins and even slaves were used as common mediums of exchange.

The people lived, throughout the area,

in massive gable-roofed houses made of planks split from cedar and spruce, the façade often decorated with huge mythological paintings and carvings and fronted by towering heraldic columns or "totem poles."

The great canoes in which the people travelled, traded and made war, were made of single huge logs of red cedar. Their great size—some of them were nearly one hundred feet long—their high prows and sterns, their graceful lines, give them first place in native American naval architecture.

To understand and appreciate the art of the region as shown in the collection, we must understand its motives, which lie in the mythology and heraldry of the people; for the fantastic animal figures which form the basis of almost every design, often conventionalized and elaborated beyond recognition, are usually one of two things—they either represent the crest or coat of arms of a family, or illustrate an incident of the old legends.

These old tales, rich in the adventures and experiences of supernatural persons, animals and monsters, form an inexhaustible mine of subjects for the artist, who chooses some particular, well known happening as the basis of each design. The heraldic carvings are more difficult to explain, because they depend largely upon the social system, which differs considerably among the different tribes; but an example from one particular tribe, the Chilkats of southeastern Alaska, may make the matter clearer. The Chilkats are divided into two clans, the Eagle and the Raven, each of which is composed of a number of families of graded rank to which animal names are given. Thus in the Eagle clan, the Bear family is considered "royal," or highest in rank, then follow in succession the Killer-whale, Wolf, Eagle, Shark, Fish-

hawk and Duck families. Similarly, in the Raven clan, we find the Whale family at the head; then the Raven, Frog, Monster Worm, Crow and Giant families.

Thus it happens that a member of the Bear family can use the bear as a crest and carve and paint the conventional bear design on his belongings; while

A good example of the use of a crest is the wooden helmet representing a bear's head, illustrated on the cover of this journal. This was one of the valued heirlooms of the Bear family of the Chilkat tribe, by whom it was used in war and ceremonies as a standard or emblem, much as the Romans used



FIG. 5.—Copper plate of the Tlingit Indians, bearing the crest of the Raven family.

a member of the Shark family has the shark for a crest, and so on.

In practice, however, the members of the Bear family may use the Killer-whale and Wolf crests too and carve them on their totem pole, as these families are related to them; and there are other complications—but the general principle has been illustrated.

the eagle. In war one of the bravest of the leading men in the family was selected as standard bearer, to whom fell the duty of wearing the helmet. In battle he kept constantly near the chief, and continually imitated the actions of the bear to encourage his fellow warriors. In ceremonies the helmet was worn by dancers representing the family. Should

a quarrel arise at a festival, the host's family helmet and other insignia were held up between the angry parties, who were then compelled to abandon their dispute out of respect to their host's totem.

The use of a legendary subject in art is well illustrated by a carved pipe from one of the tribes of the Tlingit group. It was used in a ceremony to commemorate the deaths of members of the tribe in the treacherous tide-rips and whirlpools of the narrow entrance to Lituya Bay. A mythical monster named Kah Lituya was supposed to live in an ocean cavern near the passage, and claimed dominion over the bay. He resented any approach to his domain, and tried to engulf all invading canoes. Those whom he captured took the form of bears and became his slaves. When the approach of canoes was heralded by lookouts from their watchtower on the near-by mountain Kah Lituya with his slaves grasped the water and shook it, causing waves to rise and engulf the unwary voyagers.

At one end of the pipe is carved a frog-like figure representing the monster, at the other, one of his bear slaves. They are in the act of grasping and shaking the water, the waves of which are represented by two brass ridges. A canoe cut out of brass is shown just beneath the waves.

In similar fashions a large proportion of the designs, carved, painted and woven, may be interpreted by the initiated.

Perhaps the most picturesque objects in the collection are the weird masks carved of wood, of which there are a considerable number. They are made to represent the personages, supernatural animals and monsters of the old legends, who are impersonated in dances, which reproduce their traditional behavior. Sometimes portions of the legends

were acted out in full dramatically, the parts being taken by dancers appropriately masked. Many masks, to interest the public, were provided with movable eyes and jaws manipulated with strings by the wearer; while others, the compound or transformation masks, had one face so arranged that it would fall apart and fold back at the proper time, revealing an entirely different face inside. Now and then masks are seen which are skillful portraits of living human faces, but most of them are purposely grotesque.

Also used in dances are the fine headdresses with carved wooden fronts. The front pieces are beautifully carved to represent legendary characters, and are tastefully inlaid with abalone shell (Fig. 6). A double crown, the outer of woodpecker feathers, the inner of long walrus whisker bristles, completes the circuit of the head, while down the back hang many ermine skins. Such headdresses are said to have originated among the Tsimshians, but they are widely used by well-to-do men and women of the other tribes in their dances. Sometimes soft down feathers are placed in the cavity at the top of the headdress, so as to float out like snow with the movements of the dancers, producing a very pleasing effect.

Among many other objects of unusual interest in this rich collection may be seen a number of the famous beautifully woven Chilkat blankets. Such blankets were formerly made by several bands of the Tlingit family and some of the neighboring tribes, but for some time past the Chilkats alone have retained the art, and have given their name to the product. Instead of a loom a frame of the simplest form is used for weaving, consisting of a cross bar supported at either end by an upright stick. A thong is stretched just below the cross bar, and over this the warp

strands, cut the required length, are doubled, thus hanging in position for the wool to be woven across, which is accomplished with the fingers alone, without the aid of a shuttle. The warp is a two strand cord of shredded and twisted yellow cedar bark covered with mountain goat's wool, while the wool

over the pattern on the board and then compared with the work on the blanket. Sometimes a blanket takes as much as six months to weave. Among the examples now exhibited one was made by the Tsimshians, and its very intricate pattern, a family crest, is said to represent the Thunder Bird; the others



FIG. 6.—Frontpiece of a ceremonial headdress, representing the beaver.

is made of mountain goat's wool alone. The pattern to be woven is painted, full size, on a board, of which two specimens are on exhibition. The weaver sits in front of the section upon which she is working, the pattern board within easy reach. As the design is being worked out measurements are made from time to time with a piece of cedar bark laid

are of Chilkat make, and show variations of the obscure Halibut pattern. This does not occur as a crest among the Chilkats, so perhaps these blankets were made to trade with the Indians among whom the Halibut crest is used.

Belonging to the same class of objects as the blanket is a very fine ceremonial shirt of the same Chilkat weave, with a

pattern representing the mythical Sea-bear, which, like most of the woven designs, is so obscured by purely decorative elements that it is with difficulty that the conventional outlines of the bear can be followed out and identified.

In close proximity to the Chilkat blankets, the visitor to the museum may see three oblong sheets of copper, which, although of little value in themselves, are used among the Indians to represent large amounts of property, much as bank notes represent a certain number of dollars. They were highly prized, for the possession of good "copper" added much to a man's reputation for distinction and wealth. Some of the finest, beaten out by hand from nuggets of native copper, have been sold by one wealthy Indian to another for slaves, blankets or other property worth several thousand dollars.

Sometimes a wealthy chief, insulted by a rival, would break and destroy a "copper," for the purpose, as the Indians expressed it, of "wiping away the stain of the insult with something valuable." Whereupon the rival, if he wished to preserve his dignity, felt obliged to destroy or give away enough of his own property to equal in value the ruined "copper." One of the "coppers" on exhibition shows the Raven crest engraved upon its surface (Fig. 5); another that of the Bear, while a third is plain.

The exhibition also shows the peculiar styles of clothing worn by these tribes; their vicious looking war-knives and their armor of walrus hide and wood; the different kinds of fishing implements, the highly decorated wooden storage boxes and the ornate food dishes; the characteristic baskets used for many purposes; the carefully executed carvings in slate; the paraphernalia of the medicine man; and the implements made of stone and bone. Many cases are

devoted to special collections from the various coast tribes; and by way of contrast, there is shown also a large collection from the Tahltan Indians of the interior of British Columbia, whose manufactures, though powerfully influenced by the coast people, resemble in other respects those of the northern tribes in the middle west and in the east.

Among the tribes represented in the collection, besides the Tahltan, are the various Tlingit bands, including the Chilkats of blanket weaving fame, and the Yakutats, famous for their fine baskets; the Tsimshians with their kinsmen the Niska and Kitsan, all of whom were noted as wood carvers and traders; the Haida, who prided themselves on their elaborate tattooing; the Bella Coola; the Kwakiutl tribes, including the Bellabella; and the Nootka tribes, including the Makah of Washington State. Among this last group, however, whose territory marks the southern limit of the true North-west Coast culture, the characteristic products, except basketry, are much coarser and ruder in workmanship—they lack the artistic touch of the more northern people.

M. R. HARRINGTON

GENERAL ETHNOLOGY SECTION.

MAORI FACE-TATTOO.

A TATTOOED Maori head is becoming a rare thing. One large collection (the Robley Coll.) is owned by the Museum of Natural History in New York. Outside of this few specimens are known to exist and the University Museum has been fortunate in acquiring three of these in the valuable E. W. Clark Collection.

Tattoo is of frequent occurrence among different peoples, and on some of the Polynesian Islands the early travellers

found natives whose bodies were so profusely covered with minute and well executed tattoo-designs, that they at a distance mistook them for elegantly woven garments. Maori men also tattooed parts of their bodies, but they

lipped wife. When a woman of high rank had her lips tattooed, a day was chosen for the ceremony and a captive sacrificed in honour of the event. In addition to the tattooing of the lips, the women sometimes had their faces marked



Fig. 7.—Tattooed Maori head, E. W. Clark Collection.

applied the art especially to their faces and in this respect the Maoris were unique.

The women used the tattoo to a less degree than did the men. They always tattooed their chins and lips; because red lips were regarded as a disgrace and no man would have a red-

with crosses, dots, or short strokes, and a woman of high rank might have a design in the center of her brow between the eyes. There seemed, however, to be no common rule of design for the women.

With the men this was different. The rules for their facial decorations were as

fixed and conventional as was their hospitality, or any of their tribal laws. The brow ornaments, the lines over the eyebrows, the spirals on the nose and cheeks, and the lines running from nose to chin were uniformly alike, while minute differences were introduced into the designs on forehead, chin, and at the ears. Every part of the face tattoo had its name, and these names varied in different localities.

The men did not always have the entire facial design applied, the amount depending partly on age, and partly on wealth. The operation was exceedingly painful and it caused a great deal of inflammation, which permitted only small sections to be decorated at a time. Besides a good tattooer was regarded as an artist and demanded exorbitant prices. The decoration was usually begun at puberty and continued throughout the greater part of a man's life. During the operation the person to be decorated lay down on a flax floor-mat, and the operator sat beside him sometimes applying his chisel and mallet, and wiping the wound with flax dipped in charcoal, till the subject of his artistic skill was writhing under the acute pain, and had to be held down by several men.

The heads decorated in this manner were usually preserved after the death of their owners. The brain and tongue were taken out. The head was stuffed with flax, and then steamed or subjected to the heat of a fire, while oil was poured over it to keep it from burning. Later it was exposed alternately to the rays of the sun and to the smoke of a wood fire, till the flesh had become immune to the tooth of time. The Maoris kept the heads of their friends in secret and sacred places, while those of their enemies were exposed in public and treated with marked disrespect.

The Maori habit of tattooing the face

has excited a great deal of comment by travellers and students of ethnology who have at different times come into direct or indirect contact with these people. A variety of theories regarding its origin and purpose have been advanced. They have been discussed and argued about. Incidents pertaining to Maori life, laws, and legends have been extracted in support of each theory in succession, and still we do not yet know whether the Maori tattoo was primarily a tribal mark, an insignia of rank, a means of beautification or a device for terrifying the enemy. The habit of tattooing had dwindled away and disappeared with the old men who knew about it, and we have only the heads in a few stray collections to bear witness to this strange custom.

Edward Tregear in his book on the Maori Race gives some few legends about the origin of tattoo, and as they throw some light upon the attitude of the natives themselves towards the question it may be well to repeat them in an abbreviated form. A man, Mataora, who had lost his wife went to the underworld to search for her. He came to a fire, whereat tattooers were sitting. The chief artist looked at the painted face of Mataora and wiped the design away saying: "Those above there do not know how to tattoo properly." Mataora was thrown prostrate and the operation of tattooing begun. The victim called on his wife in a song, and she came to him and tended him in his pain. They left the underworld together and Mataora taught men the art of tattooing. Before this they had only painted.

Another legend relates, that Tama was deserted by his wife, because he was very ugly; so he went to the underworld to ask his ancestors to make him handsome. They drew graceful, curved lines all over his face and body. After

many days of suffering the work was done, and when he returned to his home, all the women remarked that his ugliness had disappeared, and that he was now a noble looking man, and his wife came to him, her face radiant with smiles.

These legends as well as some songs sung during the operation, point to the motive of beautification, but there are proofs as strong as these to sustain other theories. It is not unlikely that, as in so many human customs, other ideas have been added to the original motive, all of which may eventually have been associated with tattooing, and found expression in the development of its conventional pattern.

GERDA SEEBELOV,

NOTES.

Mr. Richard B. Seager, in charge of the Cretan excavations, and Dr. Edith H. Hall, Assistant Curator of the Mediterranean Section, started in February for Crete in order to select new sites for excavation. The expedition expects to begin its actual operations in April.

On January 15th, at 8 p. m., Mr. Edward S. Curtis, author of the "North American Indian," lectured at the Academy of Music under the auspices of the University Museum on "The Story of a Vanishing Race." Mr. Curtis exhibited a series of his photographs illustrating the different Indian tribes of North America and showed several moving pictures to illustrate some of their more striking customs, such as the snake dance of the Hopi.

Through the courtesy of Mr. Edward S. Curtis, a selected series of two hundred of his highly interesting photographs of the North American Indians were placed on exhibition in the Museum on January 7th. It was first intended that this

exhibition should remain for three weeks, but owing to the great interest shown in it by the public, arrangements were afterward made to keep the exhibit open until April. The pictures continue to attract a large number of visitors and excite a great deal of interest.

The Museum lecture course held on Saturday afternoons at four o'clock has proved this year to be especially interesting. The auditorium has in each case been crowded and in several instances overflowing. The warm expressions of appreciation which have been received from many members indicate general satisfaction.

Mrs. Lucy Wharton Drexel bequeathed to the Museum \$50,000 to be disposed according to the discretion of the Trustees and an additional \$20,000 for making collections of casts.

On the afternoon of January 27th a tea was given at the Museum in honor of Mrs. Joseph Lindon Smith, who, on that afternoon, lectured on her personal recollections of modern Egypt.

On Washington's birthday, the faculties of the University of Pennsylvania gave their annual tea at the Museum, at which about eight hundred invited guests were present.

At a meeting of the Board of Managers, held on March 15th, the Building Committee reported that funds were in hand for the erection of additional portions of the Museum building. The Committee recommended that authority be given them for the erection of the rotunda as planned and, in addition to this, an extension of the new galleries eastward, as soon as the associated architects shall have completed the plans thereof. The Board approved the recommendation of the committee.

BABYLONIAN SECTION.

AN ANCIENT ANTIQUARY.

THE MUSEUM possesses a Babylonian tablet of baked clay, which has been secured by purchase. Unfortunately its provenance is unknown. On the one side there is an inscription written in reversed order in the script of the Sargonic period, about 2600 B. C. The inscription, which offers no difficul-

The fact that it is written in reversed order, and that the characters are raised instead of incised, suggests the idea that it was a stamp used in this early period. But the reverse of the tablet enables us to determine that it was actually made in the Neo-Babylonian period, and that it was for a different purpose, being the work of an archaeologist of that age. It contains several new words and apparently some irregu-



OBSERVE.

FIG. 8.—A clay impression of a stone inscription of Sargon I.

ties,* reads as follows:

Transliteration.	Translation.†
<i>Shar-ga-ni</i>	Sargon
<i>shur āli</i>	King of the city,
<i>da-num</i>	the mighty
<i>shur</i>	king
<i>ba-u-la-ti</i>	of the subjects
<i>*Entil</i>	of the god Ellil.

* The one side of the tablet was translated some years ago, see *B. E.*, Ser. D, I, p. 517.

† The reading *Shar-ga-ni shur āli* instead of *Shargonisharri*, as maintained by the writer in the appendix to *Amurra, the Home of the*

larities in the case endings, but the translation appears to be as follows:

Transliteration.
<i>zi-i-pa a-gur-ru^{abn} ushu</i>
<i>sha a-sa-ar-ru pa-li-su-tim</i>
<i>sha i-na egalli [a]-sa-ar-ru</i>
<i>sha^d Na-ra-am-^d Sin sharru</i>
<i>i-na ki-ir-ba Akkadu^{ki}</i>
<i>^mNabû-zêr-lîshir dup-sar i-mu-ru</i>

Northern Semites, has recently been confirmed by the discovery of the name written *Shar-ru-ki-in*, Schell, *Comptes Rendus*, 1911, p. 506.

Translation.

A baked brick squeeze of a precious
stone
from an exposed (?) vault (?),
which, in the palace vault (?)
of King Naram-Sin,
in the city Accad,
Nabû-zêr-lîshir, the scribe, saw.

We are at once reminded of the archaeological interest manifested by Nabonidus (555-538 B. C.), who in his passion

had built, and whose old foundation stone he had sought and not found—that temple he had built and in forty-five years were its walls in ruins. I trembled, lost heart, fell into terror, and my face changed its appearance. Bringing Shamash out of the temple and settling him in another house, I tore down that temple and sought its old foundation stone. Eighteen cubits deep I excavated and the foundation stone of Naram-Sin, son of Sargon, which for 3200 years no



REVERSE.

FIG. 9.—The archaeologist's description of the impression,
written about 550 B. C.

for restoring the ancient Babylonian temples, laid stress upon his efforts in searching for the old foundation stones of the edifices and evidently took a deep interest in bringing to light facts bearing upon the history of the structures. One quotation from his inscriptions, out of several we possess, may present the pious zeal of the royal antiquarian. In his account of the restoration of the temple of Shamash at Sippar he records:

"For Shamash, the judge of heaven and earth—Ebarra, his temple in Sippar, which Nebuchadnezzar the former king

king before me had found—this stone was shown to me by Shamash the great lord of the temple Ebarra, the abode of his heart's desire." And he proceeds to tell how on a day appointed by the god he covered up again the cornerstone with all kinds of precious stuff, gold silver, rare woods, the stone requiring no adjustment, as it had not moved an inch from its place.*

This inscription would indicate that the great temple-builder Nebuchadnezzar

* Schrader, *Kleinachr. Bibliothek*, iii, pt. 2, p. 103 f.

(604-502) had endeavored to discover the same foundation stone and failed in his attempt, doubtless recording his disappointment in an inscription which Nabonidus knew. The stone itself was, architecturally and religiously, the key of the building, and there was all urgency that it should be located and found to be in true position. This extreme regard for the stone illustrates Isaiah's word (Is. 28, 16): "Behold, I lay in Zion for a foundation a stone, a tried stone, a precious cornerstone of sure foundation." Narām-Sîn, whose foundation stone Nabonidus found, was the son of the Sargon of our brick-squeeze.

Now Nabonidus must have employed the services of what we may call a College of Royal Antiquarians, whose members brought all their archaeological lore to bear upon the king's undertakings. The contract literature shows that a scribe named Nabû-zêr-îlshir lived in this period and it is quite possible that we have the work of the same scribe before us. Being a member, doubtless, of the royal staff when the palace or temple of Narām-Sîn (about 2650 B. C.) in Accad was being excavated preparatory to the restorations, a stone object of some kind, perhaps in dolorite, containing the inscription of Sargon, who was the father of Narām-Sîn, was found. Being only a representative of those under whose patronage the work was being conducted, he contented himself with a replica of the inscription instead of taking the object itself. Fortunately, this interesting impression of the original has been preserved for us.

It should be noted also that although the replica was found in Accad, the capital of the land in the Sargonic period, Ellil, the lord of lands, whose sanctuary was at Nippur, figures in the inscription as the deity par excellence of the ruler for whom the object was inscribed.

A. T. CLAY.

THE ORIGINAL SCRIPT OF THE MANICHEANS ON TEXTS IN THE MUSEUM.

THE writer has had more than once the opportunity of presenting to the readers of the JOURNAL an account of the magical texts written on bowls found in the upper strata of Nippur by the expeditions of the University of Pennsylvania. In this paper he wishes to speak of an interesting discovery he has made in connection with the script or alphabet in which some of these texts are inscribed.

The bowls in question are to be placed at a date not later than the beginning of the seventh century of our era, that is, just before the Mohammedan conquest; they may possibly be a century or two earlier. Accordingly they are the latest texts we have found in the excavations, and are the remains of the last settlements upon the ruins of the once lordly Nippur. The glory of the city and sanctuary had departed, the religion and civilization of ancient Babylonia had disappeared, Greeks, Parthians and Sassanians came successively to rule in the valley of the Babylonians. Under the veneer of these ruling races, the old Semitic elements persisted, having a bond of unity in a language which we call Aramaic, but which was spoken in a number of different dialects, many of which may have passed away leaving no literary trace. The early history of the Aramaic stock of the Semitic group of languages is peculiarly interesting because such of its various stocks as have survived are contained almost entirely in the sacred literatures of certain religious sects, and hence we can obtain only an imperfect idea of the family of dialects in its secular character.

The bowls from Nippur are of interest as throwing some light upon this fusion of the Aramaic dialects as they existed in actual life in old Babylonia. The texts are written in three Aramaic dialects,

Ketranghelo Syriac.	Booi Texts.	Manichæan Turkish.	Ketranghelo Syriac.	Booi Texts.	Manichæan Turkish.
Ⲁ	Ⲁ	Ⲁ	Ⲁ	Ⲁ, final Ⲁ	Ⲁ
Ⲃ	Ⲃ Ⲃ Ⲃ	Ⲃ	Ⲃ	Ⲃ Ⲃ	Ⲃ
Ⲅ	Ⲅ Ⲅ	Ⲅ	Ⲅ	ditto / final Ⲅ → Ⲅ Ⲅ Ⲅ	Ⲅ
Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ
Ⲉ	Ⲉ Ⲉ	Ⲉ	Ⲉ	Ⲉ Ⲉ	Ⲉ
Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ Ⲋ	Ⲋ
Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ
Ⲏ	Ⲏ Ⲏ	Ⲏ	Ⲏ	Ⲏ Ⲏ	Ⲏ
Ⲑ	Ⲑ Ⲑ	Ⲑ	Ⲑ	Ⲑ Ⲑ Ⲑ	Ⲑ
Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ
Ⲕ	Ⲕ Ⲕ	Ⲕ	Ⲕ	Ⲕ Ⲕ	Ⲕ
Ⲗ	Ⲗ Ⲗ	Ⲗ	Ⲗ	Ⲗ Ⲗ	Ⲗ
Ⲙ	Ⲙ Ⲙ	Ⲙ	Ⲙ	Ⲙ Ⲙ	Ⲙ
Ⲛ	Ⲛ Ⲛ	Ⲛ	Ⲛ	Ⲛ Ⲛ	Ⲛ
Ⲝ	Ⲝ Ⲝ	Ⲝ	Ⲝ	Ⲝ Ⲝ	Ⲝ
Ⲟ	Ⲟ Ⲟ	Ⲟ	Ⲟ	Ⲟ Ⲟ	Ⲟ
Ⲡ	Ⲡ Ⲡ	Ⲡ	Ⲡ	Ⲡ Ⲡ	Ⲡ
Ⲣ	Ⲣ Ⲣ	Ⲣ	Ⲣ	Ⲣ Ⲣ	Ⲣ
Ⲥ	Ⲥ Ⲥ	Ⲥ	Ⲥ	Ⲥ Ⲥ	Ⲥ
Ⲧ	Ⲧ Ⲧ	Ⲧ	Ⲧ	Ⲧ Ⲧ	Ⲧ
Ⲩ	Ⲩ Ⲩ	Ⲩ	Ⲩ	Ⲩ Ⲩ	Ⲩ
Ⲫ	Ⲫ Ⲫ	Ⲫ	Ⲫ	Ⲫ Ⲫ	Ⲫ
Ⲭ	Ⲭ Ⲭ	Ⲭ	Ⲭ	Ⲭ Ⲭ	Ⲭ
Ⲯ	Ⲯ Ⲯ	Ⲯ	Ⲯ	Ⲯ Ⲯ	Ⲯ
Ⲱ	Ⲱ Ⲱ	Ⲱ	Ⲱ	Ⲱ Ⲱ	Ⲱ
Ⲳ	Ⲳ Ⲳ	Ⲳ	Ⲳ	Ⲳ Ⲳ	Ⲳ
Ⲵ	Ⲵ Ⲵ	Ⲵ	Ⲵ	Ⲵ Ⲵ	Ⲵ
Ⲷ	Ⲷ Ⲷ	Ⲷ	Ⲷ	Ⲷ Ⲷ	Ⲷ
Ⲹ	Ⲹ Ⲹ	Ⲹ	Ⲹ	Ⲹ Ⲹ	Ⲹ
Ⲻ	Ⲻ Ⲻ	Ⲻ	Ⲻ	Ⲻ Ⲻ	Ⲻ
Ⲽ	Ⲽ Ⲽ	Ⲽ	Ⲽ	Ⲽ Ⲽ	Ⲽ
Ⲿ	Ⲿ Ⲿ	Ⲿ	Ⲿ	Ⲿ Ⲿ	Ⲿ
Ⲱ	Ⲱ Ⲱ	Ⲱ	Ⲱ	Ⲱ Ⲱ	Ⲱ
Ⲳ	Ⲳ Ⲳ	Ⲳ	Ⲳ	Ⲳ Ⲳ	Ⲳ
Ⲵ	Ⲵ Ⲵ	Ⲵ	Ⲵ	Ⲵ Ⲵ	Ⲵ
Ⲷ	Ⲷ Ⲷ	Ⲷ	Ⲷ	Ⲷ Ⲷ	Ⲷ
Ⲹ	Ⲹ Ⲹ	Ⲹ	Ⲹ	Ⲹ Ⲹ	Ⲹ
Ⲻ	Ⲻ Ⲻ	Ⲻ	Ⲻ	Ⲻ Ⲻ	Ⲻ
Ⲽ	Ⲽ Ⲽ	Ⲽ	Ⲽ	Ⲽ Ⲽ	Ⲽ
Ⲿ	Ⲿ Ⲿ	Ⲿ	Ⲿ	Ⲿ Ⲿ	Ⲿ
Ⲱ	Ⲱ Ⲱ	Ⲱ	Ⲱ	Ⲱ Ⲱ	Ⲱ
Ⲳ	Ⲳ Ⲳ	Ⲳ	Ⲳ	Ⲳ Ⲳ	Ⲳ
Ⲵ	Ⲵ Ⲵ	Ⲵ	Ⲵ	Ⲵ Ⲵ	Ⲵ
Ⲷ	Ⲷ Ⲷ	Ⲷ	Ⲷ	Ⲷ Ⲷ	Ⲷ
Ⲹ	Ⲹ Ⲹ	Ⲹ	Ⲹ	Ⲹ Ⲹ	Ⲹ
Ⲻ	Ⲻ Ⲻ	Ⲻ	Ⲻ	Ⲻ Ⲻ	Ⲻ
Ⲽ	Ⲽ Ⲽ	Ⲽ	Ⲽ	Ⲽ Ⲽ	Ⲽ
Ⲿ	Ⲿ Ⲿ	Ⲿ	Ⲿ	Ⲿ Ⲿ	Ⲿ

FIG. 10.—Comparative Tables of the Script of the Syriac Pwls and the Manichaean Turkish Script.

each one in its own script. These dialects evince much inter-contamination, showing that they were used interchangeably, and the citizens were probably quite polyglot in their speech; but that there was an independence to these dialects is shown by the presence of distinct scripts; various causes, racial, political, religious, tended to preserve the identity of the several dialects.

Of these dialects one is well known as the language of that great thesaurus of Jewish lore, the Babylonian Talmud; in lieu of a better name we may call it the Rabbinic Aramaic, bearing in mind however that the Babylonian Jews spoke the dialect or fusion of dialects prevailing in the land of their adoption. Indeed the bowl-texts themselves are to be characterized not as Jewish but as eclectic, and many of them are distinctly pagan. Their script is practically the same square character which is commonly known as the Hebrew character, which was in matter of fact adopted by the Jews from Babylonian Aramaeans and not the original script of Palestine.

A smaller group of the bowls is written in the Mandaic dialect and script. The Mandaeans still survive as the last remnant of the numerous Gnostic sects which played such a large part in the religion of the Græco-Roman civilization. A good deal of its literature has been preserved, and its theology is a bizarre mixture of the various religious elements which once prevailed in Mesopotamia, pagan and ancient Babylonian, Jewish, Christian, Persian. The sect adopted a peculiar form of script, probably one which already existed in the district where the sect arose, and developed an original fashion of orthography, by using the consonantal alphabet to express very fully the vowels, thus parting company with the other Semitic literatures.*

* See W. Brandt, *Mandäische Schriften*, and *Die Mandäische Religion*.

The third group of dialects is represented in our Museum by six bowls (speaking of those in at all perfect condition); to this I may add one in the possession of Mr. Wm. T. Ellis, of Swarthmore, which he obtained on a visit to Nippur a year ago, while a bowl in the British Museum appears to be written in the same character, although it has never been correctly deciphered. The dialect is a form of what is generally known as the Syriac language, i. e., the literary tongue of the Syrian Christians, a people known to us in America, through the great stream of immigration coming to our shores, as Syrians. The dialect of the bowls is however very much contaminated by the other local dialects. The dialect has again its own script, which is evidently closely related to the Syriac alphabet, more especially to that form of it which is called Estranghelo, the alphabet of the eastern or Nestorian Syrians. Many of the characters are the same, as can be seen by reference to the accompanying table, in which the Syriac alphabet is given in the first column. By comparison with the remains of the old Aramaic alphabets on the monuments, I saw that this novel script had close relations with that of Palmyra, and I drew the conclusion that it represented an early stage of the Syriac alphabet as finally established, a sort of elder sister, to speak genealogically. I was at first unable to establish any further connections for this peculiar form of alphabet.

But some clues leading to a wider relationship have turned up in an unexpected and interesting quarter. Far off in Eastern or Chinese Turkestan, German expeditions have been uncovering the ruins and remains of a lost civilization in sand-swept wastes which once teemed with human life. M. le Coq in his lectures two years ago at the University told us of the fruits of his and his co-laborers' discoveries in that region. Among the

literary remains were portions of Christian Syriac literature, various documents in ancient Turkish dialects, and among them manuscripts which, as their contents show, are documents of the lost and obscure Manichæan sect. These documents are written in a script closely akin to the Syriac Estranghelo, with the addition of some Arabic letters, the Manichæan missionaries having reduced the Turkish dialects into the alphabetic forms which they brought with them from Mesopotamia.*

Now, as the accompanying illustration shows, the form of Syriac alphabet used by the Manichæan is almost identically the same as that found in our Syriac bowls. Almost in every case where they differ from the Christian Syriac they agree with each other (a, b, the 4th, 6th, 9th, 11th, 12th, 14th, 15th characters in the illustration). In fact, it is remarkable that there is such close similarity, as the Turkish texts must be some centuries later than the bowls. The coincidence shows that the Manichæans were using a well established script. Now Mani, the founder of the sect, was a native of the city of Babylon, a short distance from Nippur. The inference is then that he and his sect used in their literature that form of script which was current in Babylon and its neighborhood, and that it became ultimately a sectarian script, just as the Jews, Samaritans, Mandæans, Syriac Christians, have each appropriated to themselves a peculiar form of the alphabet. Our texts bear no Manichæan traces, they are the remains of a provincial dia-

lect and script which came to be the vehicle of the sect that arose in the region of Babylon.

The discovery of the original local script which Mani adopted for his sect is of considerable interest, for on the one hand we know very little directly of him or his church, and on the other hand the Manichæans were in their day a most formidable religious body. We learn of Mani and his followers only through the distorted traditions of Christian and Arabic polemicists, and it has been difficult to winnow the truth out of the chaff. Mani was the founder of a new religion, of largely Persian elements, but one which was much affected by Christian doctrines and forms. He himself was put to death by the Persian king Varanes I in 276, and the sect suffered cruel persecutions in the Orient. It spread to the West into the Roman empire, about the time that Paganism and Christianity were struggling for spiritual mastery, and became there a rival of Christianity. The Church fully recognized the danger that lay in the quarter of the Manichæans. When such great souls as the youthful Augustine had fallen under its spell, it is no wonder that Christian apologists spent much of their time in combating this Oriental heresy. And politically the new sect was so strong that we find the Christian emperors signalling it by name, out of all the so-called Gnostic sects, and providing for its repression and suppression by drastic penalties. Manichæism was the last great attempt of oriental gnosticism and eclecticism to conquer the western world. Defeated in its Persian home by the ancient Zoroastrian religion, it succumbed in the West before the Christian Church, which had the advantage of time and political favor, not to speak of religious power and truth, and it found its last home in far off lands of central Asia, where it carried on its propaganda among the

* For a description of the script and language, see F. W. K. Müller in the *Sitzungsberichte* of the Berlin Academy, 1904, p. 348; for accounts and publications of the literary remains found in Eastern Turkestan, see the same journal, 1904, p. 1389; 1905, p. 1077; 1908, p. 398; 1909, p. 1262; 1910, pp. 293, 397. The *Journal* of the Royal Asiatic Society has also in the last year been publishing translations of the documents.

rude Turkish tribes, giving them letters and civilization, until the incoming sands blighted their home or they fell before the irresistible advance of Islam.*

JAMES A. MONTGOMERY.

TAGS AND LABELS FROM NIPPUR.

AS clay was the common writing material among the Babylonians, it is quite possible to duplicate among the thousands of tablets from the Mesopotamian Valley every use known in connection with our writing material. In the large number of temple records, published from all periods of Babylonian history, practically all our legal and commercial transactions can be duplicated. *e. g.*, records of loans, payments, receipts, contracts, deeds, etc. Of special interest, in connection with the caneiform material excavated at Nippur, are the duplicates of the common, present day paper or cardboard tag and label.

Clay labels or tags, baked and unbaked, so far as the material at hand gives evidence, are found chiefly in connection with temple records. On the one hand there are those which were put on the revenues received, in kind, at the temple storehouses; and on the other those which apparently were used to tag live stock placed in the keeping of official caretakers or shepherds.

The former generally were lumps of clay pressed, in different shapes, upon the knot of the cord tying the object or goods

to be tagged. The hole passes along the main axis of the label and clearly shows the imprint of the cord. This suggests that in all probability the cord was made of fibers or rushes tied together usually with a straight, though in several cases a slightly twisted, strand. On the outside edges of the clay are plainly seen the finger markings of the scribe. This group generally enumerates the articles tagged, the individual sending them, by whom received, the month and the year. Others merely state the goods were received (*mu-du*), or delivered (*xi-ga*), and the date. Almost all have the impression of the scribe's seal. These last statements are based more particularly on labels coming from Drehem and Djiôha.

Tags, on the other hand, are either triangular or shield shaped and flat. A hole passes through each corner, and though much smaller than is the case in the former, yet the imprint is of the same character. These contain no seal impressions. The inscription mentions the kind of animal, and the name of the shepherd to whose care it was entrusted.

The purpose or use of the label evidently was twofold. By its attachment to the goods it stated the amount, whence and by whom received. This was a sufficient note to enable the scribe to later credit them to the proper individual. Among the records of the Cassite Dynasty are receipts of tithes and revenues from the outlying districts of Nippur. The Telloh records mention *TU-USH-GAL* officials. These probably were revenue officers, who, as agents of the temple, collected the taxes. The revenues, collected in these outlying districts, were sent to the temple to be deposited in its storehouse. On their receipt the scribe in charge apparently attached the label with the necessary statement, and so the steward had no trouble in keeping his accounts

* For the Manichæans the English reader may be referred to the articles "Mani," or "Mandæ," and "Manichæans," in the *Dictionary of Christian Biography*, the *Encyclopædia Britannica*, the English *Schaff-Herzog Encyclopædia*. A fuller account of the script will appear in the writer's forthcoming volume on the bowls in the Publications of the Babylonian Section. An account of Mr. Ellis's bowl will appear in the *Journal of the American Oriental Society*.



FIG. 11.—Animal Tags.

of receipts, which were as necessary as those of his expenditures. Later the label was detached and burned along with other tablets, and then preserved as a record, in fact a receipt of the transaction. In this way the label, like many little notes found among the temple records, can be likened to the modern day-book entry from which the monthly and annual accounts, of which we have record, were made.

The purpose of the tag in the case of live stock was to designate ownership. Though no labels or tags have yet been found among the Cassite records, yet some of the inventories of animals, as well as of those placed in the care of individuals, are most interesting and interpretative in this connection. One of these tablets (*Vide: Babylonian Expedition*, Vol. XIV, No. 48) records the conditions upon which live stock was turned out, and stipulates what returns were expected from the individual. Another tablet (*Vide: Babylonian Expedition*, Vol. XV, No. 199) is an inventory of cattle which were in the care of shepherds in certain towns. Among the records from Telloh and Drehem are numerous similar inventories. Some of these state the number of animals entrusted to an individual (*Vide: Langdon, Archives of Drehem*, No. 61). Others are round-ups of flocks, usually giving the number present (*gub-ba-an*) and the number that are missing (*lal-mi-an*) (*Vide: Barton, Haverford Library Collection*, part II, No. 34). In the light of such records, the use of the tag seems evident and intelligible. Tags quite likely were also used in connection with bags of flour and grain. In such cases they simply give the amount, and at times the date.

The following four inscriptions illustrate the general character of these tags.

1. One large kid of Awilum.
2. One sheep of the shepherd Ribam-ili.

3. One lamb of Uzi-el.

4. One goat of the shepherd Ahanuta.

These are animal tags with the names of their shepherds.

The following is a label for wool from a shepherd:

One talent and six mana of wool for the weaving woman.

"Sin-mu-sha-lim, the shepherd.

The 30th day of the month Shebatum, the year when Ammizaduga, the King, (dug) the Canal Ammi-zaduga.

The bulk of the objects of this class from Nippur are animal tags, and belong to the time of the First Dynasty of Babylon, 2000 B. C. Scattered through the published material are labels of other periods, *e. g.*, Lugal-anda, Dynasty of Ur, and the Assyrian period. A large number are in the Yale Collection, and in the library of Mr. Morgan, which in connection with others in various collections, I have fully treated, and expect to publish under the title: "*Cuneiform Labels and Tags of the Third Millennium B. C.*"

C. E. KEISER.

NOTES

THE following collections have been purchased since the last JOURNAL went to press.

A collection of ethnology from Africa and the South Pacific.

An Australian collection.

A New Zealand collection consisting of very rare and old pieces.

Miss Gerda Sebbelov, Assistant Curator of the Section of General Ethnology, has accepted the position of Executive Secretary of the Camp Fire Girls, to which she was appointed in March.

Seven delegates from the Deutsches Museum for Technology in Munich, headed by Dr. Oskar von Miller, visited

the Museum on April 12th and spent some hours studying the architecture and the exhibits.

The Classical Association of the Atlantic States held its sessions in the Museum on May 3d and 4th.

The National League of Handicraft Societies held its annual conference at the Museum on May 7th and 8th.

The members attending the International Navigation Congress visited the Museum on May 27th.

At the meeting of the Building Committee held on May 4th, the architects submitted their plans for the rotunda to be erected at the south of the present building. The lower portion of this rotunda will provide an auditorium seating 750 persons; while the upper or main floor will be an exhibition hall lighted by means of windows placed high above the floor and close to the roof. The lecture room can be used in connection with the Museum or independently by means of a separate entrance from Thirty-fourth Street. It was announced at the same meeting that a sum considerably in excess of the amount needed for the rotunda and for its furnishings had been subscribed and the architects were instructed to prepare plans for a further addition. It is expected that the specifications will be complete before the 1st of August.

At the meeting of the Board, held on May 3d, it was decided to send an expedition for three years to the Amazon Valley for the purpose of making ethnological collections and studying various Indian tribes of this region. At the same meeting Mr. Algot Lange was appointed leader of this expedition. Mr. Lange will spend the summer making his preparations and will be prepared to start on this extended exploration in the autumn.

The President of the Museum went to London on May 8th in order to be present at the Eighteenth International Congress of Americanists. He is to spend the summer months travelling on the Continent.

The Director has been appointed delegate to represent the Museum at the Eighteenth International Congress of Americanists held in London from May 27th to June 4th and also at the International Conference of Anthropologists to meet under the auspices of the Royal Anthropological Institute on June 5th to consider a proposal for organizing an International Congress of Anthropologists. Dr. Gordon was also appointed delegate from the United States Government to the International Congress of Americanists.

At the May meeting of the Board of Managers the Lucy Wharton Drexel Medal for 1911 was awarded to Marc Aurel Stein for his explorations in Central Asia and his publications thereon.

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THE MUSEUM AND THE PUBLIC SCHOOLS.

ONE of the most interesting and useful developments in the activities of the Museum is the co-operative work which is being carried on with the schools of the city. The idea is one which is by no means new in museums in this country and in Europe receiving support from municipal sources. If

the city to avail themselves of the opportunities which the Museum presents. The initial step was taken in December, 1911, when an invitation was sent through the District Superintendents as follows.

"The University Museum is situated at the corner of Thirty-third and Spruce Streets, opposite Franklin Field. Its object is to illustrate the history of mankind. In its halls the visitor is brought



FIG. 12.—At the entrance to the Museum.

the school work which has just been inaugurated here has any unique feature it is to be found in the fact that this Museum receives no support from the city. The experiment has been the result of a desire on the part of the authorities of the University Museum to extend its educational influence beyond the confines of the University and to enable all the educational interests in

in close contact with the different peoples of the world. In arranging the exhibition, one of the objects always kept in view has been to bring vividly before the eye the various peoples that children read about in their books. For the schools they are especially adapted to the teaching of history, language and geography.

"Here is an example. In the halls con-

taining the exhibitions illustrating the American Indians, the children can see how the Indians lived at the time of Columbus and Penn, and how they fought the white man in his settlement of America, first in the east and later in the west. They can see how the Indian children were brought up, the toys they used, the games they played, how they dressed and how they became men and women.

"In the same manner may be read the stories of Egypt, Babylonia, Greece and Rome, Japan and China, Mexico and Peru and the wild tribes of Borneo, Australia, Oceania and Africa.

"These exhibitions are being constantly enlarged, and no pains are spared to procure the best, and to make them so attractive that the lesson which they have to teach becomes a pleasure and a recreation. One of the first objects of the University Museum is to lighten the task of the schoolroom, both for the teacher and for the pupil.

"The teachers are invited to bring their classes to the Museum, where everything will be done to stimulate the interest of the children in their studies. It is the object of the authorities to make these visits pleasant and entertaining. The curators and their assistants, especially trained for the purpose, will meet the classes and talk to them in the simplest and most telling language about the collections, explaining their uses and their special connection with the subjects that the children may be studying.

"Lectures, illustrated by lantern slides, will be given at any time in the auditorium of the Museum at the request of any teacher who will send notice to the director of the Museum twenty-four hours before the time selected for bringing the class."

In making this experiment the Museum has had the cordial support of the Super-

intendent of Education and from the start the principals and teachers have shown by their response how highly they value the Museum's action. Last year the invitation was sent out rather late in the season, which prevented many teachers from making appointments. Notwithstanding this the result was decidedly encouraging. From January to June 1,331 pupils were brought to the Museum in classes by their teachers. These classes ranged from the Third Year of the Elementary Schools to the Fourth Year of the High Schools. The teacher bringing the class in each case selected the subject to be illustrated and the following list will show the scope of these Museum lessons and will serve to indicate the variety of interests in the public schools which can be helped by the Museum.

The American Indians.
The people of Borneo.
The peoples of Oceania.
The peoples of Africa.
The peoples of China and Japan.
The peoples of Europe.
The peoples of Asia.
Ancient Greece and Rome.
Ancient Egypt and Babylonia.
The world's peoples.
The habits of primitive man.

In each case the talk was adjusted to the grade of the school and the kind and amount of instruction the pupils had received. In this adjustment and in the ability of the lecturer to adapt the talk to the mental attitude of the children consist the secret of success. The appeal which this work makes to the children depends upon the reality of the things which they see and of which they are told and the closeness of the association between these things and the mental experiences of the children themselves. Our practice has been by means of well

selected lantern slides and by a series of objects from the people dealt with, to bring that people vividly before the children's minds and to enable them to feel themselves in close touch with the life of that people, whether belonging to a period 5,000 years ago or in our own time.

In the practical working of the scheme

with reference to their origin, use and method of manufacture. In the case of objects which can be handled without risk of damage, they are often passed around among the children, for one of the attributes of the young mind is a love of handling things, an instinct which when gratified enables children more easily to realize the meaning of an



FIG. 12.—A group of children in the courtyard of the Museum with their Indian friends.

classes are first entertained by a forty minute talk with lantern slides. On the platform are placed a series of thirty or forty selected objects of common use among the people under discussion. After the lantern slides have given a vivid impression of the personal appearance of the people, their habitations and surroundings, these objects are taken one by one and explained to the children

object. This lecture room performance is calculated to last an hour, but usually the interest of the children is so stimulated at the end of an hour that the sessions last from an hour and a half to two hours. For the younger children, the teachers in a great majority of cases select the American Indian. This has proved a wise and judicious selection for several reasons. All children are

interested in the Indians and have their imagination stimulated by the mere mention of an Indian. The collections in the Museum, and notably the George G. Heye Collection, are especially well fitted to illustrate the life of the Indians. As shown by these collections, the Indian children, with their pretty dolls and clever

at the conclusion of each lecture. Mr. Louis Shotridge, a Chilkat Indian employed in the Museum, and Mrs. Shotridge, dressed in the costume appropriate to the Indians of the plains, have taken an active part in this class work, moving among the children and answering the many questions asked them. It must



FIG. 14.—A favorite exhibit for the girls is that of the Indian basketry.

playthings, their sports and lively games, furnish topics that make these talks as pleasant for the instructor as for the pupils. Again, the classes that select the Indian for their subject are privileged to see and talk with an Indian man and woman who are always on hand to conduct them through the exhibition rooms

be said that this particular feature has proved immensely popular with the children, who immediately become greatly attached to the Indians and establish at once the most friendly relations.

The higher grades are apt to choose the ancient civilizations, and even if the peoples of antiquity cannot be made

visible by the presence of living representatives, they can, nevertheless, be made very real by means of the Museum's collection, as well as by lantern slides. In every instance, whatever the subject chosen, the teachers have expressed the greatest approval and the children have never failed to enter thoroughly into the spirit of the work.

In order to test the effect of these exercises on the children's minds and the reliability of their memories, one of the schools participating in the work was asked to request the children to write essays on what they had seen and been told in the Museum. The teachers of another school requested the boys and girls to draw pictures illustrating some phase of primitive life or some particular primitive invention and to explain the device in a few words. The Wharton School, which contributed the essays, sent in a large number of compositions which showed a high average of intelligence in the children and proved the permanent value of our work by the reliability of their memories and the accuracy with which the ideas imparted to them were usually reported. The Brooks School, which was selected for the drawings, also made a return which was particularly pleasing for the skill and good taste shown in the water-color drawings made by the children and in the faithfulness of their memories. In both essays and drawings no one could fail to detect the stimulating influence upon the pupils of having seen and handled the rare and curious objects which come from remote parts of the world or from the distant past. They are being helped to observe for themselves how other people think and act under conditions different from our own.

The humanizing influence of this method of instruction and of these excursions into the past history of our

race and into the habitations of unfamiliar peoples, often in a lower state of culture than ourselves, is, in the end, the highest and noblest effect of the Museum's educational work among the school children.

So long as the teachers continue to co-operate with the Museum by bringing their classes here, so long as they enable us to feel by their interest and enthusiasm that our work is of value to them and helps the educational work entrusted to them, so long will this Museum be able to afford the school children of Philadelphia many desirable things and many pleasures which they would otherwise be denied.

G. B. G.

MEDITERRANEAN SECTION.

THE CRETAN EXPEDITION.

THE story of the archaeological discoveries in Crete is now ten years old. Even our school-boys are learning to-day that the labyrinth of Minos has been found and that it was a palace three stories high, with open courts and winding corridors, with storehouses for treasure, a well equipped bath-room and a suite of apartments for the queen that would compare favorably with those of a high-born woman of to-day. But the tale is not yet told. We cannot read the writing of this far-away people of 2000 B. C. We do not know whence they came or whither they later went or how they were related to the Greeks of Pericles' time. All this must be learned by the spade. Only by the patient excavation of site after site can such problems be solved, and it is to the lasting credit of the University Museum and of the people of Philadelphia that they have understood this and have made possible further explorations in Crete.

Two years ago I commenced excavating for the Museum a town situated on a steep and lofty mountain-crag in eastern Crete where the successors of Minos had lived in the days of their declining power. It was in a wild and rugged district where our ponies could scarcely make their way over boulders and along



FIG. 15.—A Vrakastro Shepherd-boy.

dizzy ledges, and where it was difficult to find a level spot big enough to pitch my tent. Our faithful workmen had no other shelter than the small bush huts which they improvised for themselves, and their food was confined to bread and oil with an occasional dish of snails as a relish. But in spite of our hardships

and difficulties we accomplished our end, for we found deep deposits of earth crammed with pottery, the very best evidence possible. It seemed, in fact, that we might learn from an extended excavation of this site, especially if we could also find the tombs, the answers to some of the vexed questions as to when and how the Minoan power fell, and it was with this purpose in mind that I returned to Crete last March.

Crete is not an island which is easy of access. This year I tried going by way of Egypt, but the same difficulties beset me as heretofore. The steamers were small and dirty and we were landed in rowboats at 1 a. m. in a heavy sea. It was two days before my companion and myself had sufficiently recovered from seasickness to start on our journey eastward. In the meantime I had opportunity to see the new accessions of the Candia museum and to arrange with the government for our excavation permit.

All traveling in Crete is done on horse-back. Camp beds and the necessary food and clothing are carried on the pack-saddle of the muleteer. There is no pleasanter mode of travel. The Cretan pony gets over the ground easily with a quick, tripping gait, and the grave courtesies and simple hospitality of the islanders are a never-failing source of pleasure. Such travel is not dear. Two francs will pay for the evening meal and an empty room in which the camp-bed may be set up. The Greek monasteries also make a practice of receiving guests, and these are the most delightful places to stop, for they are clean and are built in high and picturesque places. I visited one this year which was a miniature Amalfi. The abbot and monks will accept no pay, but the guest is expected to leave an offering before the eikon in the church.

Our museum is fortunate in being allowed to use as excavation headquarters the comfortable house of the director of these excavations, Mr. R. B. Seager, at Pachin Ammos. Here we stayed until the rains were over, making ready to go into camp. There were tents to patch, stores and kitchen utensils to arrange for, and wheelbarrows and water barrels to overhaul. In the meantime we dug a few stray tombs at Kayousi, to which our attention had been called by our Kayousi workmen.

herds who pastured their flocks close by, but every night and morning the well of water near my tent presented a lively scene when the women and children from the village below stopped to water their "possessions"—generally a donkey, a goat and a pig apiece—on their way to and from their fields. This well of water was, in fact, the social centre of the place, all the more so when the women learned that I would allow them to inspect my tent. Sometimes at evening when I rode home



FIG. 16.—Excavator's Tent on Vroketra.

On the last of April we were ready. A Turkish caïque brought the picks, spades and wheelbarrows as well as the tents and camp supplies to a cove at the foot of the mountain and from there our workmen, with the help of a few pack animals, carried them to a little plateau half way up the mountain, where we had decided to pitch our camp this year. A small stone hut was secured for a kitchen by the payment of ten francs for the season.

We had no neighbors save the shep-

from work, I would find a dozen waiting for me to show them the wonders of my tent, which consisted of a camp bed, a table, and two chairs.

On May 1st we began digging in earnest with about fifty men. I set them first to clearing away brush and stones on the north face of the summit where unusually good walls were peering out from among the bushes and where I thought well-preserved houses might be found. But I also started another project. Two years ago under the guy

ropes of my tent I had noticed a heap of stones that looked like the top of a "bee-hive" tomb, but I had not investigated it because of the inconvenience of disturbing my tent. This year, however, I resolved to lose no time in trying this spot and sent one of the oldest and most trusted workmen there. The second day when on my rounds I visited him, he showed me a piece of bronze which I recognized as a piece of a foot from a very fine bronze tripod. He also

all the other workmen together found during that first week. The porcelain beads particularly interested me, for they looked to be Egyptian. I had already filled all the small boxes I had with them when Nikolaos, who was full of jokes about the value of beads in the next world, suddenly cried, "Behold, I have his seal too." And sure enough, there was a porcelain seal with Egyptian hieroglyphs, and the same day he found five more. I cannot read hieroglyphs:



FIG. 17.—Packing up the boxes of Antiquities;

pointed in triumph to a small pile of teeth and of human bones he had found. He had not yet cleared any of the walls of the tomb, but that it was indeed a tomb there could be no doubt. During the next week I spent most of my time sitting on the edge of this excavation, for every few minutes Nikolaos would hand me something, another piece of the tripod, a bronze safety-pin, a porcelain bead, or a bit of pottery. So much pottery came to light that we were able to put together forty vases, more than

we had, accordingly, to wait until two weeks later we chanced to have a visit from an English Egyptologist. He pronounced them to be commemorative probably of the XXII dynasty, from about 950-850 B.C. We had thus accomplished one of our purposes, for we had obtained evidence for dating the fall of the great Minoan civilization.

I had thought that with one tomb found the cemetery of our town was already discovered, and that it would be an easy matter to find more tombs.

But such was not the case, for the tombs proved to be widely scattered. We spent days in digging trial trenches which yielded absolutely nothing. We did, however, find more in the end, six of the "bee-hive" type and at least fifty shallow graves which yielded quantities of vases and many bronze safety-pins or *fibulae*.† It is often said that Queen Victoria invented the safety-pin. But it was only a reinvention; it had been in use throughout the first millennium B.C. These pins, moreover, are of singu-

lar value to the archaeologist, for according to their shape and size the peoples who used them may be classified. We had therefore good evidence for the solution of the other archaeological problem as to who these people were. It was now the middle of June and the heat was exceedingly fierce. The women and children no longer returned to the village for the night, but whole families were camping in the fields for the harvesting season. Near every threshing-floor a family was encamped under a tree,

while men, women and children helped with the work of reaping, threshing and winnowing, all of which is accomplished by the most primitive methods. We were daily visited at our tombs by these neighbors, who brought us fresh almonds, apricots and plums tied up in the corners of their aprons or handkerchiefs, and were delighted to receive in return presents of pins with colored heads.

In spite of the heat there was one thing more to accomplish. One of our basket-boys had brought me excellent potsherds



FIG. 18.—Cretan Method of threshing.

from a field in the plain below close to the sea, and I was eager to try there for a week to learn if it was a site worthy of further excavation another season. Unfortunately the Romans had been there before us, so that much of the pottery was badly broken. Some beautiful specimens of the very best period were, however, recovered during the week that the excavation lasted, and there is every evidence that much more lies hidden away beneath the earth.

But by this time our money was

exhausted and we were obliged to send for the Turkish caique, in which all our goods and chattels together with our precious finds were shipped to the house.

A few days were spent there in sorting pottery and then I packed up the antiquities in fifteen cases and set sail with them in the small coasting steamer for Candia.

The authorities of the Candia Museum with their usual kindness gave me the use of a large cool basement room where I could spread out my pottery and bronzes on long tables. Here I worked for ten days, photographing and taking the final notes and measurements. The last task of all was to petition the Cretan government in the name of the University of Pennsylvania Museum for a consignment of the objects found. I asked for over sixty pieces which, if they are granted to us, will reach the Museum this autumn.

E. H. HALL.

AMERICAN SECTION.

THE FIESTA OF THE PINOLE AT AZQUELTÁN.

BY the first of January, 1912, I had already spent nearly three weeks in the little pueblo of Azqueltán, and had been accepted as a permanent resident. This little village lies at the bottom of the barranca or cañon of the Río de Bolaños, in the northern part of the Mexican State of Jalisco, and on the edge of the Huichol country. Here dwell the remnants of the Tepecanos, or, as I prefer to call them, the Tepelhuán of Azqueltán, for they claim, and probably with justice, to be an isolated branch of this greater nation.

The little pueblo, reported to be so aboriginally clannish, so absolutely isolated, by Hrdlička in 1903, has since

greatly changed. The village is now full of mixed blood, the houses are mostly of adobe; nothing but Spanish is ever heard in the houses, and most of the older customs are entirely forgotten. Only in the isolated little ranch houses, situated within a five-mile radius of the pueblo, are found the conservative persons of the older generation who still cling to the customs of their ancestors.

Following information obtained from natives with whom I had established relations of confidence, I started out about dusk with Eleno, and following a winding trail that led toward the Cerro de la Niña Encantada, arrived an hour later at the isolated ground which had already been prepared for the ceremony.

The square or patio, according to my observations, was about thirty feet in width, the size of all patios which I noticed in this part of the country. It was a roughly circular enclosure, cleared of all plant-life and free from stones. On the northern side several trees marked the outer limits, but on the south a ring of stones was placed. Approximately in the centre was a pile of flat stones covering a heap of ashes, this being the fireplace necessary to all ceremonies. In a rough circle without were placed seven large stones partly sunk in the earth, these forming the seats for the communicants at the ceremonies. This circle of seats was approximately fourteen feet in diameter, leaving an outer circle or path about eight feet in width for the dancers. To the east the circle became elongated, like the neck of a pear, and here, just beyond the outer diameter, lay the altar. This was a rough structure of stone, five feet in width and a foot in height, roughly circular and flat on the top.

A fire was burning in its proper place in the middle of the patio and several figures were gathered around it. With-

out stopping to notice details, however, even without depositing our bundles, we performed the five circuits of the patio required by ceremony, pausing before the altar at the completion, where Eleno delivered one of his Tepehuan prayers. Then we were at liberty to take observations. Just outside of the patio itself

simple, gentle old soul, greeted me kindly, lamenting to Eleno that so few of their brethren cared enough for the health and the safety of the pueblo to come and aid in the ceremonies so beneficial to them all. One of the other old men was well known to me, but the rest were strangers. It was evident that, while not



THE ARROW CEREMONY.

FIG. 19.—The Cantador Mayor or Chief Singer and his two principal assistants.

was another fire; around which a group of several women and children were gathered. Within, around the central fire, were four elderly men and two middle-aged ones. Only these of all the Tepehuanes had gathered to celebrate their ancient custom. The Cantador Mayor, or Chief Singer, the highest functionary of Tepehuan religion, a

invited to the function, yet, having arrived, there was no objection to my presence. A glance at the altar showed me that it was covered with the "chimales," ceremonial arrows, decorated "jicaras" and other objects. The men were conversing unrestrainedly, generally in Spanish, but oftentimes in Tepehuan. Presently the Chief Singer approached

the altar, where he busied himself for a time. Though it was too dark to see, I learned afterward that he put some "peyote" in a cup of water, meanwhile reciting a prayer and offering the "peyote" water to the four cardinal points. This peyote is an object of great religious importance to the natives of the north of Mexico, the rite extending even to our own Indians in Oklahoma. It is the root of a small cactus, *Lophora*, and contains a narcotic principle much valued by the Indians. The cult is particularly well developed by the Huicholes, among whom the procuring of the plant constitutes a religious duty. As it does not grow in this part of Mexico, it is necessary to make a long pilgrimage far to the east, a journey of thirteen days, and during all this time, from the time of setting out from the pueblo until the last rites are performed after the return of the party, a period of forty-seven days, nothing but the peyote itself may be eaten by the "peyoteros." This duty is still considered obligatory by the Huicholes, but in these decadent days it is permitted that the Cantador of Azqueltán purchase his peyote from the Huicholes. It is still considered, however, an object of great power, almost supernatural, and its use is everywhere hedged with custom and restriction. When it is offered to the cardinal points the Cantador must recite the formula, *ná varietō' do' d' hī va'-mōrōr a'nūdōr napuivo'pmitāda hō'ga navaruunhī' komak*, "It—is—green beautiful lake—in whence thou—wilt—send that which—is—thy—cloud."

Soon the Cantador came up to us and requested us to occupy the stone seats close to the fire. Producing a large bow with a tightly strung sinew string, he prepared two short sticks. Then, in response to a request from one of the elder men, he went to the altar and gave the asker a small piece of peyote, rubbing

the rest on his leg where he had a bad sore. Turning to me, he requested to know the hour. Upon my replying that it was seven-twenty, he asked how many minutes to eight. Nevertheless, with a glance at the stars he remarked that it was well to commence. Then, approaching the altar, he took from there five ceremonial arrows, wound with colored yarn and with feathers of the royal eagle attached. One was placed in the ground just to the west of the fire, two others were given to two of the elder men, while the Cantador retained two. Then he seated himself on his proper seat, the one nearest the altar, facing to the east, the other two men on either side, and we others in a row a trifle behind him.

Following the lead of the Cantador, the arrows, grasped by the pointed end, and with the eagle feathers hanging loose, were slowly raised, pointed to the east above the altar and slowly swung around to the north, the west and the south, while the Cantador slowly recited the formula, *ei'ar vwō' 'tai ba' barip, hu'rip, u'gipaa, vwōe ei'kōr hō'ywan*, "East—beneath, North, West, South, entire horizon through." When the initial position to the east had been reached, the arrows were held stationary there while the Cantador recited the *Perdon* Mayor, or principal prayer. It was recited in a low tone, almost inaudible, and in long sentences, requiring a full breath at the beginning, the tone dying out toward the end. The *perdon* is too long to be given here, requiring about five or six minutes to complete. At the end, the arrows were again pointed to the four cardinal points and another shorter *perdon* recited, followed by an even shorter one. Following the last pointing of the arrows, they were replaced on the altar and the fiesta had been opened according to ritual.

Then commenced the real work of the

evening. Scooping out a little depression in the earth immediately in front of his seat, between him and the altar, the Cantador inverted over this a "jicara" or half-gourd, and on this rested his bow, holding it firm with his naked left foot. Then, striking the bow with the

with intermission, an average of an hour and a half to a song. The first song is, *ta' ta ha' rikama eibainud'ū dukama*, the song to the morning star; the second *tō' dō' ō'hi u'vikama eibaindu' dukama*, the "beautiful green woman," now identified with *Maria Santísima*; the third,



FIG. 20.—The Cantador Mayor or Chief Singer with his bow in position.

two sticks so that it gave a clear note, he commenced his evening of song. Thus he sang, alone and unaccompanied, except for the monotonous note from the musical bow, with but four short intermissions between songs, from eight in the evening until after daybreak. Five songs occupied these ten hours, making,

uf tuta' vikama eibaindu' dukama, the song to the water woman; the fourth, *ei' ciartio' 'tikama eibaindū' dukama*, the song to the sun's rays; and finally, *to' nor so' so'ptio' 'tikama eibaindū, dukama*, the song to the sun bead-man. Each of these songs has a different tune, with innumerable verses. Each

verse consists of two lines; the first, the line by which the song is here named; the second, differing more or less for each verse, but similar in each song. The sentiment itself is really beautiful and worthy of a poetical translation, speaking of how the great gray clouds pile up from the beautiful blue east, how the lightning begins to appear and all the heavens reply to its voice, how the welcome rain commences and the whole world is refreshed by its coming.

Meanwhile, while the Cantador was performing his task, we others were expected to aid the efficiency of the prayer by dancing the "mitote." This is performed by dancing singly around the patio, just outside of the circle of seats, in the usual anti-clockwise direction, pausing at each cardinal point and facing out for a moment to dance to the north, the west, the south and particularly to the altar at the east. It was not required to dance throughout the entire song, but during a part of each song, and particularly during the latter part, it was expected that all male attendants should take part in the mitote. The dance is done by taking three steps alternately by either foot, the last step being stamped. Some performers took three short steps forward, others one step forward, one a trifle back, then a longer step forward, repeating with the other foot. During the intermissions between the songs, and even during the singing, we lay around the fire, smoked, dozed and chatted in a low tone. The fire was under the charge of my other old friend, the father of Eleno and son of the Nestor Aguilar mentioned by Hrdlička, who evidently saw no antagonism between his two offices of *ci' ciartio' 't* or Guardian of the Fire and of sexton in the little church.

As the night wore on and daybreak approached, the Cantador commenced

on his last song to the sun. This had not a plaintive tune like some of the others, but a gay, happy and triumphant air almost like a song of victory or of deliverance from tribulation. Its continuous burden of *tonori', tonori', tonori'* "the sun, the sun, the sun!" made a deep impression on me as the moon gradually gave way to the morning star and the latter to the sun. One who has experienced nights passed in the open in the rare air of Mexico cannot wonder at the joy with which the natives greet the first warm rays of the sun.

After the last song had been completed, some of the communicants, including a woman and child, approached and knelt at the altar, making certain motions in following the lead of one of the elder men who pointed with a long cane on which some decorative designs had been incised and the tail feathers of the "cuiss" or "aguililla" attached. All were then given "pinole" or pulverized corn to eat.

Following the administration of the pinole, as the dawn brightened, the Cantador approached the altar and again removed the four ceremonial arrows. Giving one to each of the two eldest men and holding the other two in his right hand, he again seated himself on his "banco" with his assistants on either side of him and prepared to end the fiesta according to ritual. Slowly the arrows were circled from the east to the north, the west and the south, while the formula was repeated as before. Pausing on the return to the east, the Cantador recited another prayer of a minute or more in duration, giving thanks to heaven for benefits and begging pardon for sins. Then the arrows were ceremoniously circled again, replaced at the altar and the fiesta was ritually complete.

It yet remained, however, to cleanse and bless the communicants. Going to the altar, the Cantador took a basket

and from it distributed to all present five or six "chuales" or tamales, made of the black corn. Then, standing at the altar, he broke one into six parts, throwing one part to each of the four cardinals and to the zenith. Another bit was thrown to the centre of the group of men. Then, standing at the altar, with the cup

liarly graceful motion waved the feathered arrow over our heads, finishing the motion to each of the cardinal points and the zenith and thereby exorcizing all our troubles to the corners of the earth. Then by means of a feather dipped in the cup, water of peyote was sprinkled on our heads and in our hands, imparting



FIG. 21.—The purification ceremony.

of water in which several pieces of dried peyote were floating in his hand, he called us, one at a time, to the altar to be cleansed of all evil and sickness and blessed and rejuvenated by the power of the arrows and the peyote. Standing there by the altar, our hats in our hands, the Cantador slowly and with a pecu-

to us its magic power. Then the remainder of the peyote water was sprinkled over the altar, the seats, the fire and the attendants, the last few drops being applied to the head and hands of the Cantador by the Guardian of the Fire.

At this point I asked for a delay of a short while, explaining that the sun was

not yet high enough to enable me to photograph. With customary courtesy and deference my request was granted without question and I busied myself by observing the arrangement of the altar. This was decorated with all the paraphernalia requisite to the religion of this region. At the back, to the east, was a large, embroidered cloth, possibly two feet square, supported by two upright sticks with a cross stick, and directly in front of this, four "bastoncitos" or sticks decorated with cotton, arranged in two groups. In the centre of the altar, evidently merely resting there, were the "petaco" or box in which the paraphernalia were kept, a cloth and a string of dried peyote. The principal objects of religious ceremony were all gathered at the front of the altar or on the ground immediately in front of it. Placed on the front of the altar were ten *jicams* of various sizes, some decorated with beads inside and out, others plain; in these, resting on cotton, representative of the clouds, lay the little objects, archaeological, modern and natural, which are significant of natural phenomena, animals, local places or almost any conception of interest to the Tepehuan mind. With much pride the Cantador displayed to me his valuables, remarking their power for good in protecting the pueblo from sickness and all ill. Immediately in front of the altar, planted in the earth, were two large "chimales" emblematic of the face of God, large hexagonal objects of colored yarn and cotton, and to either side of these were other objects of ceremonial importance, "bastoncitos," "algodones," both made of sticks and cotton and one or two ceremonial arrows. In a row in front of these, evidently to protect them, were placed the four new ceremonial arrows already used by the Cantador and his responders. Again, immediately in front

of these, was placed the little china cup with its peyote water. Against the altar rested the long cane of *aguillilla* feathers which seems to be emblematic of the authority of the Cantador.

The Cantador packed all his paraphernalia in the wooden box, except his feathered cane, which he carried in his hand; the Guardian of the Fire carefully replaced the flat stones over the ashes of the fire; all hands took up their belongings and we were ready to start. Led by the Cantador, all present, this time including the women, solemnly performed the five ceremonial circuits of the *potio*. On reaching the altar on the last circuit, the men reversed and retraced their footsteps, going this time in a clockwise direction to the entrance to the patio at the north. The women did not step in front of the altar this last time, but, waiting till the men had turned, fell in at the rear of the little procession.

THE CREE INDIANS.

MR. F. E. PEESO, formerly a student in the Department of Anthropology at the University of Pennsylvania and now a resident of Morswa, Mont., has been taking advantage of his opportunities by making observations on the Cree Indians. A collection of myths which he has made will be published in another place. The following notes and illustrations are of interest.

EDITOR.

With the exception of the Chippewa, the Cree is the largest tribe of the Algonquian stock. Small bands are scattered throughout Alberta, Manitoba and Saskatchewan. Physically, the Crees are not as imposing as their neighbors, the Assiniboin or Blackfeet, being of medium height and rather slightly built, but what

they lack in size they make up in agility. The women, however, are noted for their comeliness. They have intermixed to a considerable extent with the Assiniboin, Saulteaux and French. The Pas-kwa-we-e-ne-wok "Prairie Indians," resemble in mode of life and customs the other tribes of the northern plains and are said to be fairer and cleaner than their

the execution of Louis Riel, in 1885, a number of them fled across the line into Montana, where several hundred still remain, but with their allies, the Assiniboin, who joined them, after breaking away from the Sioux, they waged bitter war with the Blackfeet, Gros Ventres, and other tribes to the south. They formerly ranged between the North and



FIG. 22.—Cree Indian Youth.

kindred who dwell in the timber. The Mas-keg-ah-wak or Swampies and Sah-kah-we-e-ne-wak or Timber Indians, resemble other tribes of the woods and are expert canoe-men.

The Crees have seldom fought against the whites, although they participated to some extent in the Red River and Riel Rebellions in 1869 and 1885. After

Saskatchewan Rivers, northeast along the Nelson River to Hudson Bay and northwest, almost to Athabasca Lake. At times they pushed as far south as the Yellowstone River. In 1835 a Gros Ventre camp of four hundred lodges was totally destroyed by them on this river. They were formerly a timber people, but were attracted to the plains by the buf-

faloes, and after they obtained firearms they greatly extended their territory and ranged over a vast country. In 1786 nearly half the tribe died of small-pox. They were again attacked by this

they could bring to bear. Polygamy was practiced and their morals were loose. Even before contact with the whites, they were very fond of gambling, the hand game being very popular.



FIG. 23 — Cree Indian encampment

disease with great severity in 1838. When trade was not concerned, they are reported to have been scrupulously honest, but in driving a bargain they would resort to all the trickery and deceit

They had also dice games, double ball, the moecasin or hidden ball game, ring pin, guessing stick game, snow snake, lacrosse whip and top and others. They have also adopted checkers and cards.

"Casino," or "Sweep" as they call it, is popular with them.

As to their religion, they did not differ much from the surrounding tribes. The sun, moon and heavenly bodies, thunder and other natural phenomena were deified; and in a lesser way, the bear, elk, buffalo, moose and other creatures and objects. If an animal was killed, his skull or a stone representing his

clothing, robes, furs and other articles prized by Indians would be hung over the stones and skulls.

Sometimes they would carve a pillar in the image of a man, which they called "Ma-to-kän", which was stuck up outside the camp. Upon this were hung beads and pieces of cloth, and to it they made offerings, which were left until destroyed by the elements, for no one



FIG. 24.—Cree Indian encampment.

spirit was placed near the fireplace. Then the hunter burned tobacco or sweet grass so the words he spoke would arise with smoke to the spirit of the animal. He would say, "Give me life, food, clothes and good hunting," or whatever he desired. He would put an old buffalo skull on the ground and poke buffalo grass into the eye and nose cavities and pray for what he wanted. Big dance lodges were erected and offerings of

would touch what had been offered to the spirits. The Cree also practiced dog sacrifice. They also had a ceremony of the smoking lodge they performed in the autumn. Beside the lodge they set up an image and hung clothing upon it. If any Indian needed an article so placed he might take it and leave tobacco in its place. When a child was born, the mother would make a feast and cook up some berries or some other Indian

delicacy and call together a number of old men. She would tell one of them what the name of the child was to be. Then taking the child in his arms, this man would sit down and, beating time with a rattle, would sing a song directed to the spirit of the being or object that the child was named after. These songs are called *We-täs-käh-täk*. Then he would name the child.

a shallow grave. The knees were drawn up and the body was placed on its back in a reclining posture, the head toward the north. Two or three nights after, a dead feast was held, but it was not a very large affair. While the body was being removed from the lodge, the spirit was thus addressed: "Go, go straight ahead. Don't take anyone with you; don't look back. And when you reach



FIG. 25.—Cree dog travois.

There is practically no marriage ceremony.

When a person dies everything is taken out of the lodge. The body is taken out of the back or side of the lodge and not through the door. Originally the body was dressed and buried immediately after death occurred, but is now kept over night. It was dressed in its best clothes and, together with weapons, utensils, tobacco and food, placed in

your destination, talk for us. Tell that young man not to bother us, not to come and take anyone away." The relatives of the deceased gave everything away, the lodge and all its furnishings, their clothes, dishes and other property. Their tribesmen, however, contributed to their wants, one giving lodge, another a blanket and so on until they were as comfortably fixed as before.

The Crees had quite a number of dances:

War Dance—Pwat-se-mo-wen.

Caribou Dance—Weth-te-ko-kan-se-mo-win. This is a masked dance, the dancers making masks out of old lodge skins, buffalo robes, etc.

Prairie Chicken Dance—Pä-heyo-se-mo-wen.

Buffalo Dance—Mos-to-se-mo-wen.

died, additions were made to the bundle and each year a piece of skin or cloth was added to the wrapping. In course of time some of these bundles became quite large. They were tied at the ends and hung up in the lodge. Once a year a ghost dance was held, either in the spring or in the fall. Each family would



FIG. 26.—A Cree Indian, Montana.

Give Away or Present Dance—Mä-lä-ye-to-se-mo-wen.

Round Dance—Wäs-kä-se-mo-wen.

Ghost Dance—Che-pa-se-mo-wen.

When a person died, a lock of the hair was cut off and placed with tobacco and sweet grass and made into a bundle about a foot or fifteen inches long, wrapped in a skin or cloth. As others

bring its bundle, which was called "Ne-yä-che-kwa," which implied that it was always carried along. Each family bringing a bundle is supposed to bring a kettle of soup or some other contribution for the feast.

On the first round, the dancers make the round holding up the bundles, which are then hung up in the back of the dance

lodge, after which the dance continues and is concluded by a feast.

Sun Dance—Un-pa-wa-se-mo-wen.

The Cree Sun Dance is in many points similar to that of the Blackfeet and others;



FIG. 27. —The offering pole. From a drawing made in 1886 by R. Tait McKenzie.

but it differs in some of the minor details. A large dance lodge is erected. A centre pole is set up with side poles placed in a circle around it, supporting the rafters which radiate from the centre pole. Brush is then laid on the rafters.

All the materials for this lodge are collected on one trip. A nest is made on the centre pole for the thunder (Pe-ay-so). Furs, robes, feathers, calico, beads and other offerings are hung from the centre pole and on them is marked the spirit for whom it is intended. Should a person desire any particular thing very much, he makes a promise to dance in the Sun Dance. Now the dancer has lost much of its original significance and ritual. The government has put a stop to the self-torture which was formerly practiced. A small fire of sweet grass is made which the dancers inhale. Then they begin to dance with their eyes fastened on the centre pole of the lodge. All at once they seem to see a face there. Then they sit down and paint their face in the same way as the one they saw. Sometimes they see an eagle, a feather or some other object there. Then the dance is continued, the dancers blowing on whistles made of eagle wing bones, sometimes elaborately decorated with porcupine quills and feathers.

When they give out, the head man of the dance gets up and makes a fire of sweet grass to which he holds the pipe which he then offers to the four cardinal points and prays for rain. Should it rain, the dancers hold out their cups to catch the drops. These they drink. If no rain falls, they drink nothing. The dance is continued for two days and two nights, during which time the dancers neither eat nor drink (except as mentioned), although they may smoke.

The more remote bands still live chiefly by hunting, trapping and fishing for the Hudson Bay Company. Others nearer the settlements work in the woods as boatmen, and in lumber camps. The Crees are experts in the timber. Some act as guides for tourists. Many are freighters, farmers and stock raisers. They are cunning and expert workmen.

Their weapons, implements, utensils, clothing and ornaments are durable and ingeniously made. Their quill and bead work designs are striking and characteristic.

The lodges are similar to others. When set up in a windy place, four poles are tied together; when in a sheltered place, only three.

The lodge is called—Ne-ke-wap.

The poles—A-pā-so-yā.

The flap poles—Kā-kā-pā-kwā-nā.

NOTES.

THE following collections have been purchased since the last number of the JOURNAL went to press:

A South Pacific Collection consisting of very rare, old, ethnological pieces chiefly from New Zealand, Tonga, Samoa and Fiji.

A Chilkat blanket.

A large ethnological collection from the Congo collected by the well known explorers Frobenius and Brandt. This collection was purchased in Hamburg during the summer by the Director.

A small collection of North American ethnology.

In addition to these purchases, Mr. George G. Heye has added extensively to his collection of North American ethnology.

The following gifts have been received:

From Mrs. Talcott Williams, an Indian basket.

An Indian war club, presented by Mr. John Moss.

An Egyptian mummy, presented by Mrs. L. A. Barakat.

A ceremonial vase from the ruins of a Greek Church in Messina presented by Chev. Baldi, through Dr. Allen J. Smith.

An ethnological collection from Sierra Leone, presented by Bishop O'Gorman of West Africa.

A collection of photographs of natives in Sierra Leone, presented by Bishop O'Gorman of West Africa.

Prof. W. M. Flinders-Petrie, Director of the Egyptian Research Account and the British School of Archaeology in Egypt, has sent as a gift an ancient Egyptian oil portrait on a wooden panel.

The excavations in Crete were carried on during the summer at Vrokaastro in the eastern end of the island, where a late Minoan town and cemetery were opened up by Mr. Richard B. Seager and Dr. Edith H. Hall. In another part of this JOURNAL will be found Dr. Hall's account of the summer's work.

Mr. Wilson D. Wallis spent the summer among the Micmac Indians of Nova Scotia making ethnological studies and collections.

Mr. Louis Shotridge is engaged in making a model of his native village of Klukwan on the Chilkat River, southeastern Alaska. Mr. W. C. Orchard has finished a model representing an encampment of the Plains Indians. It is proposed to continue with other models representing other tribes. These models, while they are at once attractive and instructive to all visitors, are especially liked by the school children, to whom the little tents and houses with the men, women and children going about their regular occupations, have an especial appeal.

An invitation has been issued to all the school teachers of the city to bring their classes to the Museum and offering them assistance in explaining the collections to the children and giving illustrated talks on topics selected by the teachers themselves. These children's afternoons at the Museum, which were started last winter, have proved one of the most interesting features of the Museum work. The teachers have responded enthusiastically to the invitations, and this year we expect a large increase in the number of classes which will take advantage of this opportunity for work of an entertaining kind outside the class room. This number of the JOURNAL has as a special feature an account of this school-work.

The success of last year's lecture course has encouraged the authorities to make a still greater effort this year to secure the best lecturers and the most interesting subjects, and also to make a larger outlay for the lecture course. The program which will begin on November 16th and now in the course of preparation, contains the names of several distinguished authorities on the subjects relating to the history of man.

The architects engaged upon the plans for the building extension have been at work during the entire summer and after a careful series of studies have finished the plans and specifications. An early number of the JOURNAL will contain an account of these plans and the proposed building operations.

In connection with the proposed Amazon expedition a one hundred and

eighty-two ton boat has been purchased and her hull rebuilt and remodeled to fit her for the work contemplated. Owing to these extended preparations, the expedition has been delayed and will probably not reach the field until the early months of 1913. The next number of the JOURNAL will be devoted to a full account of the expedition.

Prof. George A. Barton, of Bryn Mawr College, who has been granted special permission to copy tablets in the Museum, has undertaken a volume of cuneiform texts for the Babylonian Series. Dr. Barton devoted much of his time during the summer recess to copying the tablets assigned to him, but owing to illness was unable to complete the work. He has therefore arranged to devote part of his time to this work during the coming winter.

Dr. Arno Poebel, of Johns Hopkins University, having been granted special permission to work upon the Babylonian collection in the Museum, spent the summer copying tablets and preparing a volume for publication in the Babylonian series. Dr. Poebel copied in all about two hundred texts, many of which are of unusual interest.

An expedition has been sent to the Philippine Islands in charge of Mr. Otto Hanson for the purpose of making ethnological collections among the Bagobos of Southern Mindanao. Mr. Hanson has lived for ten years at Davao and is well known to all the wild tribes in his neighborhood and has also the advantage of a knowledge of their language.



THE EXTENSION OF THE MUSEUM BUILDING

DURING the closing months of 1912 plans were completed for building an addition to the University Museum according to a modified form of the original design. It was announced at the same time that funds sufficient to complete this additional construction were on hand. The building operations which are now about to begin are the first steps taken in this direction since the opening of the present building in the year 1899. To understand the significance of this step toward the realization of a project on behalf of the people and for the advancement of knowledge, it is necessary to know something of the history and scope of the modern museum.

Some of the greatest minds of the nineteenth century applied themselves to the investigation of nature and through their labors Natural History was raised to the prominent place which it now occupies. The latter half of that century especially witnessed the vigorous growth of Natural History museums with their systematic collections illustrating the history of the mineral, the vegetable and the animal kingdoms. The public of almost every great city has thus been made familiar with the scientific interpretation of the world we live in and of the laws that shape its history.

In these museums the approved plan has been to develop the exhibits in genetic groups or series. Among these groups or series a prominent place was naturally given to that one at the head of which stands the human family. By means of this impressive argument the attention even of the illiterate was drawn to the natural relationship of our species to the world and to the universe. With this biological lesson the educational work of the Natural History museum ended so far as man was concerned. The position occupied by the human family in these systematic collections was relatively insignificant, because being based on biological affinities, they stopped with the physical aspect of the different species. Of all these species man alone

presented on the other hand a fruitful mental development. This fact, taken in connection with the general scheme of classification, eventually gave rise to a new problem in connection with Natural History museums. On his physical side man fitted perfectly into the scheme, but on his mental side he was entirely apart and presented an array of phenomena peculiar to himself. On the one hand his physical

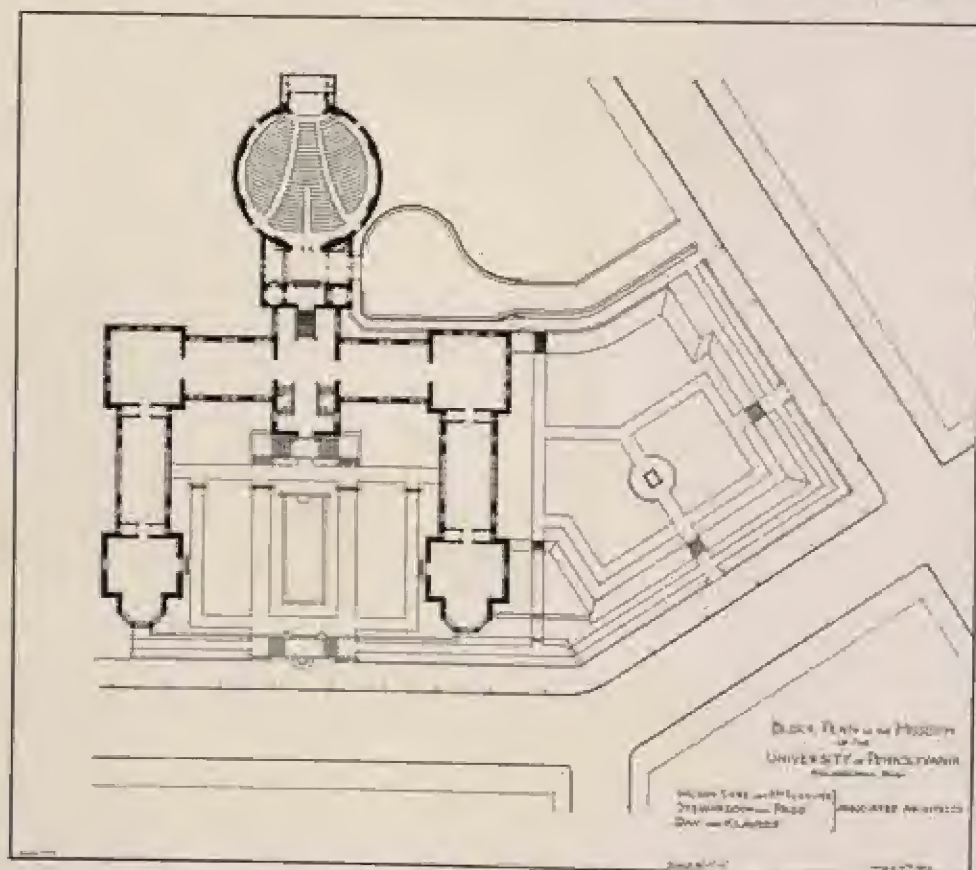


FIG. 29.—Ground plan of the University Museum comprising parts already finished and parts now under construction.

structure left him among the animals, while on the other hand his mental specialization set him apart and gave him a unique position in the animal kingdom.

The directors of some Natural History museums set about to cover this last phase of evolution by adding to the subjects already illustrated in their collections, a department of Anthropology, comprising series of objects representing the works of man and illustrating the growth of human culture in its manifold varieties. Such purely human

phenomena as progressive social institutions, the industrial and æsthetic arts and religious beliefs thus came to be included within the scope of some Natural History museums. Prominent examples of anthropological collections developing within the Natural History museum are to be found in the American Museum of Natural History in New York and the Field Museum of Natural History in Chicago.

Of independent growth were the museums of Art, occupying a different position and confining themselves to collections illustrating the fine arts in their greatest perfection without particular reference to their earlier development.

The conditions of growth at present in the Natural History museums seem to indicate a point in the future at which the collections relating to the mineral, plant and animal kingdoms generally and those which relate to human civilization will be separated entirely and provided for in separate buildings. In the meantime the experience gained by their association has helped the development of historical and anthropological collections along systematic lines because biological methods have exerted a favorable influence on the study of History and Anthropology. At the same time the anthropological method has exerted an influence on the museums of Fine Arts to the extent that some of them are making an effort to overcome the influence of their traditions and to develop their collections with an enlarged scope and on systematic lines with reference to human history. The museums of Natural History and the museums of Fine Arts are thus being drawn together by a common interest in human history. It is likely that the result will be a division in both the one and the other and the consequent formation of a third class of museum deriving a part of its traditions from each and consisting of the human history collections and the scientific interests associated with them.

In this final division of labor there will be on one hand the Natural History museum containing collections illustrating the mineral, plant and animal kingdoms including man in his purely physical aspects. On the other hand will be the museum of Fine Arts that will aim to present examples of the best either in classical art and the art of the renaissance or else the best in modern painting and sculpture and the related arts. Between the two will be the museum of Human History, the special business of which will be to fill the gap separating the other two, and to illustrate the history of man as an intellectual being. The museum of Human History will be as much concerned with the earlier and cruder stages of development as with the more advanced, and will

not be directly concerned with modern things. Indeed, since the early time of crude culture was vastly longer and more general than the later state of better things, a relatively large proportion of the collections in such a museum will be those pertaining to savage peoples, or to the prehistoric peoples of Europe, Asia and Northern Africa. The civilizations of antiquity, such as the Egyptian, Babylonian, Mycenaean, Minoan, the Greek and the Roman and all the others that contributed so powerfully to modern culture should be represented. With equal interest must be included those nations whose culture was related more remotely or not at all to our own. Among these are the nations of India, Central Asia, China, Japan, Mexico, Peru and many nameless peoples of antiquity. This seems to be the ideal towards which constructive



FIG. 30.—Elevation of the building showing dome under construction.

activity in this educational movement is progressing during the present century. Each museum will approach that ideal in its own way and conform to these standards according to its opportunities and its individual interests.

The University Museum has grown up along these lines and has in a measure been anticipating the general movement for museums to illustrate the life history of the human race.

The relationship between any museum building and the collections preserved within its walls is so intimate and so important that the development of one cannot properly be achieved without reference to the other. These two phases of museum construction, the erection of a building and the assembling of collections, should proceed hand in hand in order that inward growth should mould the outward form. This is only a statement of the general principle that good architecture

requires that a building should be adapted to its uses. A building not so adapted, no matter what its design, is a failure in an æsthetic as well as in a practical sense. The truth of this principle is forcibly illustrated in the designing of a museum building, which should be an intelligible expression of the culture concept which it involves.

A building which aims to embody in its contents the history of civilization in its progressive development should without adhering to any one historical style in itself represent something of the history of

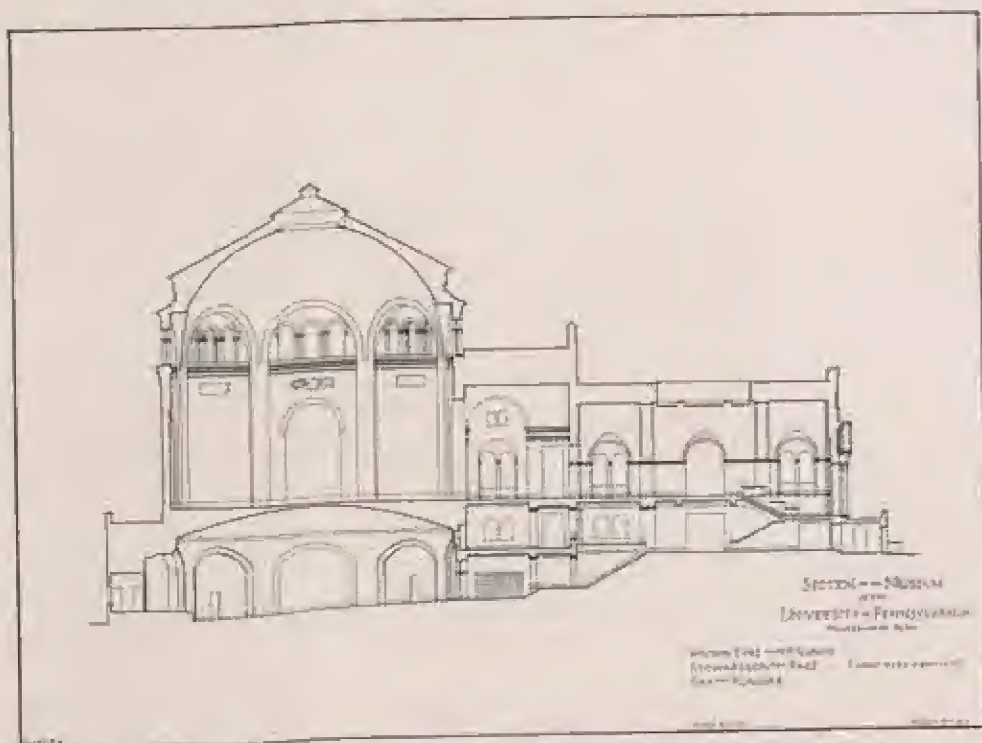


FIG. 31.—Cross section of the University Museum. The dome with the auditorium below the main floor is the portion under construction.

architecture. If not an expression of its highest development, it should at least represent an historical phase in the art of building without advocating too clearly the claims of any one period or people. At the same time a building which would meet this demand would still fail to satisfy the requirements of good taste in architecture if it lost sight of the functions of a modern museum and failed to meet with equal directness the purely physical properties of the exhibitions and the scientific interests for which it is erected.

Without making claim to the attainment of so much perfection,

it may be said that the architects of the University Museum have conceived a plan which in its proportions and in its design is admirably suited to the purposes of such a museum as has been described. This plan has broken away from all precedents in museum building and followed an original idea, giving rise to a building which is at once unique and adaptable. The dominant feature of the architecture will be a dome surmounting a large exhibition hall. From this hall, galleries running east and west will connect with other halls similar in form, but inferior in dimensions, also surmounted by domes which, though prominent, are dominated still by the central dome. From the two subordinate halls four wings extend, north and south with separate entrances and with courts and formal gardens between. So far as the historical style is concerned the inspiration was drawn perhaps mainly from the Roman Basilica and the Romanesque style of Northern Italy.

It is worth while to examine this plan with reference to the collections in order to see how well the building may be adapted to a consistent scheme of classification.

In its complete state there might be installed in the four main wings the collections which illustrate the four culture areas that correspond to the earlier history of human civilization. Thus, one might be devoted to the peoples of Asia, one to the American Indians, one to the African negroes and the fourth to the peoples of Oceania. Underneath the smaller domes that flank the central dome might be placed the collections of Egypt and Babylonia. In the central hall, the crowning feature of the building and underneath its dome, might be placed the artistic productions of Greece and Rome.

In the various connecting galleries, large and small, might be arranged those collections which pertain to special phases of human culture or collections that have special reference to the development of the arts. Here also might be placed the museum library containing those works of standard value that have special reference to the collections and which would be required for reference by the curators. In the basement beneath the great central hall might be placed an auditorium capable of seating two thousand people. For the administration of such a museum, a large number of storage rooms are required as well as laboratories for the scientific labors of the curators and their assistants. The building plans as they grow will adapt themselves to these needs as well as to the other requirements of a modern museum according to the teachings of experience.

The part of the building now actually in process of construction comprises the westernmost of the two subordinate domes with connecting galleries. Directly under the ninety-foot dome, lighted from above, will be the large circular exhibition hall already described. Beneath this hall and at a depth below the basement of the building will be a circular auditorium with 750 seats. This auditorium is to be fitted with every feature calculated to secure the best results and give the greatest amount of comfort to the audiences. When the time comes for a larger auditorium, it might be built in connection with the central hall and the hall devoted in the meantime to that use, might be converted into an exhibition room.



FIG. 32.—The present building with the new addition looking east.

The building will be fireproof in construction and will be supplied with every possible precaution for the security of the treasures that will be kept within its walls. It will also be equipped throughout with such devices as modern methods afford for the proper heating, lighting and ventilation of the exhibition rooms, the auditorium, the offices and workrooms.

The building operations now inaugurated, it will be seen, are not intended to carry the building to completion. The larger plan which has been outlined, if it is ever realized, as every worthy object should be, will require a long period of growth and will afford a wide scope for the ability and generosity of all who are or who may become interested in this liberal undertaking on behalf of education and the people.

PROGRESS IN 1912

A PART from building construction, the Museum during 1912 made more progress than during any other year of its history.

Expeditions were sent to Crete and to the Philippines and other expeditions were organized to go to the Amazon Valley and to Central America. By a substantial contribution of money, the Museum undertook to coöperate with the British School of Archaeology in Egypt and thus participate in Prof. Flinders Petrie's work of excavating the site of ancient Memphis. Seven thousand specimens were purchased, coming from all parts of the world and illustrating the life history of many peoples. Educational work in connection with universities and colleges, art institutions and the public schools was liberally developed. Increased audiences, taxing to its utmost the capacity of the lecture hall, listened to the Saturday afternoon lectures. Four scientific publications were issued and the number of visitors to the collections was three times greater than ever before.

Many of these undertakings, especially the expeditions to the Amazon and to the Philippines and Prof. Flinders Petrie's work, promoted in 1912, will begin to bear their fruit during the year on which we have entered. Through the pages of the *JOURNAL* the patrons and protectors of the Museum will be kept informed of the progress of these undertakings and of the inauguration of new work or the purchase of important collections.

That the increased effort and efficiency of the year now closed meets with just approval on the part of the people is shown by the increased number of visitors who are taking advantage of these opportunities, and who are to be seen every day enjoying the collections. Besides the two prime interests claiming immediate attention, namely, building construction and the development of collections, the Museum has embarked on an educational work of importance. In order that the people of Philadelphia may become more familiar with the equipment and purpose of the Museum, there have been inaugurated systematic exercises for the instruction of the younger generations, because on them the Museum in its fuller and riper development will largely depend in the years to come. This is the beginning of the educational work in which we are engaged and which does not stop short of any educational interest whatever within the legitimate scope of the Museum. To demonstrate its value to the community at large and to define

its exact relation to educational and popular interests are tasks never lost sight of in the midst of the general expansion. To give to the greatest possible number of persons in every intellectual and social station, opportunities of seeing with their own eyes the history and condition of the world, to broaden the outlook on life and to discourage the insular attitude of individuals towards mankind are duties always kept in view. The Museum's scope in educational matters is therefore generalized in one direction but highly specialized in another. Its influence for the diffusion of knowledge is extended by other methods no less legitimate than its exhibitions and its publications. Among these the best known and also the most generally approved is the public lecture course. The topics selected are always such as have cultural value as well as present interest. The lectures are usually illustrated by the best or most characteristic examples and deal with a wide range of subjects from exploration to the arts and crafts, from the supreme achievement in art of the highest civilization to the art of savage folk. These lectures are not technical. They are given by the men who have the best right to speak with authority on the chosen subjects and who can address themselves agreeably to those who are not specialists and to those who seek intellectual recreation or an hour's entertainment by listening to themes that appeal to the cultured taste of all humanity.

Perhaps of even greater and more far reaching importance than the public lectures are the illustrated talks to school children in the auditorium of the Museum and in the exhibition halls. On every afternoon in the week classes from the public schools are invited to the Museum where they are accompanied by their teachers, and where men and women especially trained for the purpose talk to them on a variety of subjects related to the studies with which they are occupied in school. Not only the public schools, but such institutions as the School of Industrial Art, Ursinus, Dropsie College, Temple University and even the Pennsylvania Institution for the Blind have received during the year organized aid from these talks and from the collections and equipment of the Museum.

The educational work of the University Museum which begins in the street and continues through the public school to every condition of society, culminates in the University itself where its collections are used for the encouragement of research and for illustrating subjects taught in various departments of instruction. The

opportunity which it affords for research along many lines following the development of human thought and the history of human institutions is becoming more and more valuable as a part of the educational equipment of the University. The collections provide scholars with materials of investigation that are otherwise only found in the great Museums of the world. Egypt, Babylonia, Crete, Peru and the nameless nations of antiquity are represented in these collections for whoever is interested in the records of the past. The collections from the heart of Africa, Australia, Borneo and from the aboriginal peoples of North and South America invite the labors of him who would help trace the early history of the arts, or the relationships between the different peoples of the earth and between the different periods of development. These are a few of the many subjects for research to be found in the Museum, and the presence of so much material for investigation cannot fail to act as an inspiration for those who have the ability and the inclination to devote themselves to scientific research along these lines of peculiar interest.

TWO BLACK-FIGURED AMPHORÆ WITH SCENES PORTRAYING THE BIRTH OF ATHENA.

WHEN, in 1904, the great German archæologist, Adolf Furtwaengler, paid a visit to this Museum, his attention was attracted by two large Greek amphoræ or wine-jars, decorated with scenes portraying the birth of the goddess Athena. Upon his return to Europe, Furtwaengler presented at a meeting of the Munich Academy of Science a report of the more important antiquities he had seen in American museums and among them included these two amphoræ, shown in the accompanying illustrations. They were excavated from an Etruscan tomb at Orvieto in 1907 by Mr. A. L. Frothingham and were acquired for the Museum through the generosity of Mr. John Wanamaker. At the time of their discovery, they were broken into many small fragments; these were afterward joined together and pieced out at the Museum.

Nearly a century has now passed since the first Greek vases were recovered from Etruscan tombs. In 1829, a German scholar wrote as follows to the *Prussian Gazette* about discoveries then being made in Etruria: "Your correspondent who speaks as an eye-witness can

never forget the wonderful spectacle when he first beheld from the hill of Campo Morto the numerous excavations scattered over the neighboring plain on all sides, with the huge tumulus in the center. On closer examination his astonishment only increased. The various bands of laborers, who had come from distant parts, chiefly from the



FIG. 33.—Amphora A. Height 22½ in.

Abruzzi and Romagna, were distributed under foremen from their own provinces; and three tents formed the central point into which poured the incessant stream of newly found vases or vase-fragments still covered with damp soil. Attempts were made at once to put the fragments together in the tent occupied daily by the prince (the Prince de Canino) and his family; these were then sent to Musignano,

the prince's country house, and handed over to experienced restorers. Their work continued day and night; your correspondent was greatly surprised to see one morning two beautiful large vases restored, which he had seen in fragments at the excavations the previous afternoon. The prince devoted all his time to the remarkable discoveries on his property which yielded in a few months one of the finest collections of vases known to us. The study of these extraordinary discoveries and monuments proved sufficiently fascinating to induce him to undertake their interpretation."

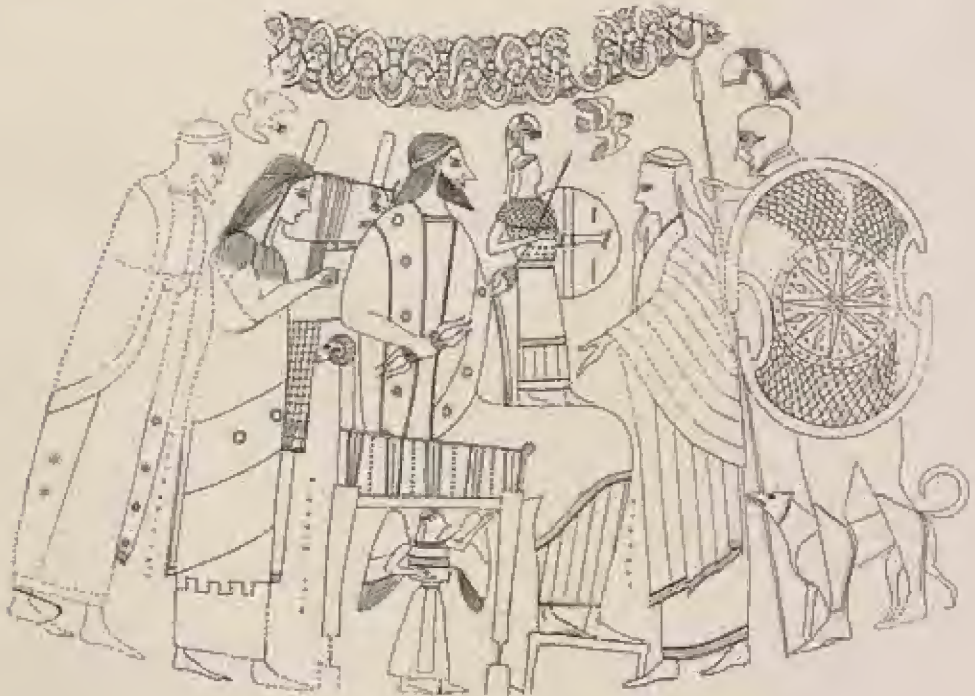


FIG. 34.—Obverse of Amphora A. The Birth of Athena.

The mythological scenes portrayed on these vases gave rise at first to curious interpretations. The Prince of Canino, aided by his German chaplain, took Dionysos for Noah and read the name of the potter Exekias as Exekiel. Great progress has been made of course since these first thrilling discoveries in the study of antique painted vases. The provenience can now be determined; although found in Etruria these painted vases are not, as was at first thought, Etruscan, but are the products of Attic potteries. Again the date of Greek vases can be settled with a fair degree of accuracy on the basis

of technique, inscriptions, artistic style, and subject of decoration. And lastly the scenes painted upon them can now be correctly interpreted, thanks to the century of scholarship which has been expended upon them and which has thrown a flood of light on the study of mythology and of Greek private life.

The two vases under consideration are good examples of both the perfection of form and the skill in decoration attained by Greek potters. The subject of form may be dismissed with the single



FIG. 35.—Reverse of Amphora A. The Reception of Athena in Olympus.

observation that entire simplicity is here combined with the greatest utility. The decoration is, of course, that which chiefly concerns us. It is confined on either vase to two panels on the shoulder and to a zone of ray-pattern just above the foot. The background of the panels is the warm red of the Attic clay; the figures are painted in black with the addition of purple, of white, and of incised lines for the details. With the exception of the decorated parts, the surface of these vases is entirely covered with the same black glaze-paint which is used for the figures of the panels, a glaze which cannot be either equalled or imitated to-day.

The period in which such black-figured vases were manufactured corresponds roughly with the sixth century B. C., and throughout this period the miraculous birth of Athena was a favorite subject. In literature, references to this divine event occur as early as the time of Homer. More explicit statements are made in Hesiod and in Pin-



FIG. 36.—Amphora B. Height 21½ in.

dar, and in the Homeric hymn to Athena we find the following detailed description: "the counsellor Zeus from out his holy head himself did bear her, in all her panoply of arms, golden and very bright, and wonder possessed all the immortals as they beheld. Forth before Zeus she suddenly sprang, forth from his immortal head, brandishing her sharp spear and great Olympus resounded terribly at the wrath

of the gray-eyed goddess, and the earth gave back a fearful sound and all the sea was stirred and its purple waves confounded. . . . and the bright son of Hyperion stayed his horses for a space, and the counsellor Zeus rejoiced." In vase-painting the subject is reproduced some forty times. The two vases before us afford an excellent opportunity of studying the current version of the myth, as conceived by Attic artists.

On the obverse of amphora A (Figs. 33 and 34), the center of the panel is occupied by Zeus who sits upon a richly carved throne, his feet upon a footstool; a thunderbolt is held in his right hand, and with his



FIG. 37.—Obverse of Amphora B. The Birth of Athena.

left hand he supports Athena who stands upon his knee. The moment depicted is that which immediately follows the miraculous birth. This is indicated by the small size of the goddess, by the attitude of the little Nikē beneath the throne of Zeus, whose very presence as well as her gesture of annunciation proclaim the great event, and by the attitude of adoration assumed by Eileithyia the goddess of childbirth who has come to support Zeus in his travail. Behind this deity stands Ares, fully armed, his dog beside him. On the left of the scene behind the throne of Zeus is Apollo with his lyre ready to celebrate in song the divine birth. The other figure on the extreme left cannot be identified inasmuch as a large part of it has been

restored. It might be thought that the inscriptions would serve to identify these figures, but unfortunately they do not make sense but are added merely for decorative effect. Of thirty-five vases, portraying the birth of Athena, which were studied in 1880 by Robert Schneider, only five show Athena standing on the knee of Zeus as in this vase. The others represent either the moment before the birth when Zeus is still laboring in the throes of childbirth or the actual moment of the birth when Athena is emerging from his head. This type of scene is therefore comparatively rare.

The artistic merit of this portrayal should not be overlooked.

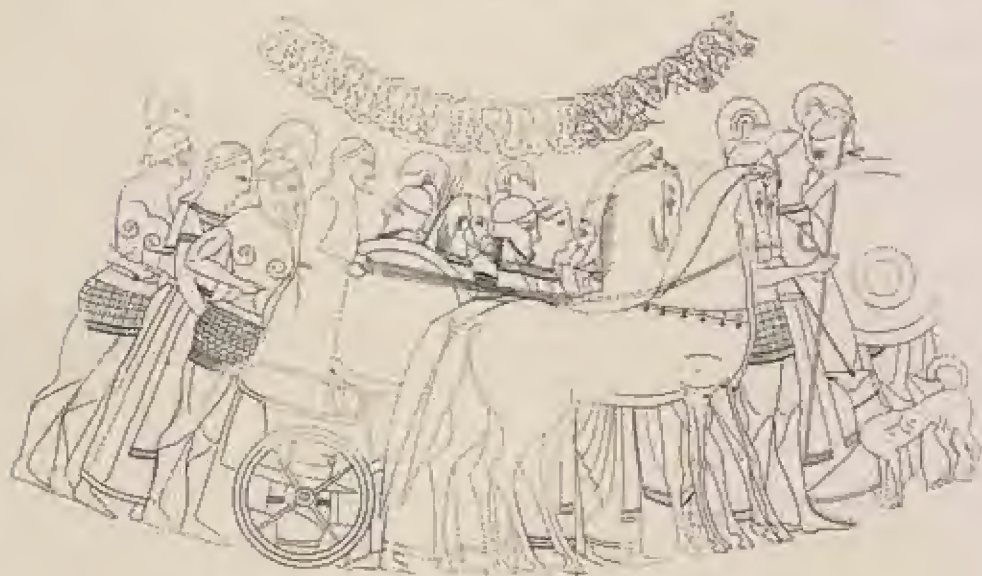


FIG. 38.—Reverse of Amphora B. Chariot and Warriors.

The illustrations give but a faint notion of the charm of the painting which, though bound by convention, is yet full of originality, and which tells its story with a childlike earnestness and honesty which compel our admiration.

The reverse of the amphora (Fig. 35) shows the entrance of Athena to the circle of the gods. Unfortunately many pieces from this side of the vase are lacking, but enough remains to show Athena seated beside her father on his throne, and surrounded by deities. Before them are Ares and Eileithyia, still in an attitude of adoration, together with other gods whose identity is not clear. Behind the throne are Poseidon and Amphitrite.

The birth scene on amphora B (Figs. 36 and 37) differs in several

respects from that already described. The birth takes place in the presence of a larger number of deities; two Eileithyiae instead of one confront Zeus, together with Ares, and Dionysos wearing a garland of ivy. Behind Zeus stand Apollo, Poseidon, Amphitrite, and Hermes. The moment depicted is here the actual moment of birth when Athena is springing from the head of Zeus. The sister goddesses of child-birth have still their left hands upraised with palms held uppermost in a gesture which seems either to invoke aid or to betoken astonishment. This scene, accordingly, conforms to the more usual type. It contains, however, one feature entirely new. The space beneath the throne of Zeus is filled here not by a Niké but by a little goblin with a human body, the wings of a bird, and the head of a dolphin. Was the presence of this extraordinary little creature supposed to augur well for the birth, did his dolphin's head symbolize the river Triton where the birth took place or was he inserted merely at the caprice of the artist?

The reverse of this amphora (Fig. 38) is decorated with a group of warriors and a four-horse chariot.

Such is the dramatic bit of Greek theology which these vase-paintings portray in so lively a manner. They serve also another purpose. It is a well known fact that the birth of Athena was the subject of the west pediment of the Parthenon. It was also represented in a painting made by Cleanthes of Corinth for a temple of Artemis not far from Olympia, and in a bronze relief by Gitiades in the Chalkioikos at Sparta. These great monuments of art have perished but of their character and artistic charm we can get some conception from the vase-paintings left to us, which, though they date from a period considerably anterior to that of the Parthenon, may yet be held to conform to a scheme which early became stereotyped and afterward was repeated with alterations in later representations of the subject.

E. H. H.

THE ART OF GREAT BENIN.

AMONG the collections purchased last summer none is of greater importance than the bronzes and carved elephant tusks from Benin.

Great Benin, a negro city and capital of a kingdom of the same name on the coast of Guinea and near the banks of the Niger, was discovered by Portuguese navigators in the fourteenth century. It was then a rich city enjoying a profitable trade in slaves. Later



FIG. 39.—Bronze portrait with headdress and choker.

and for several centuries, successive kings established trading relations with Dutch, Swedish and English expeditions. Sir Richard Burton made a trip to Benin to try to put a stop to the human sacrifices for which it had become notorious and which had given it the name of the city of blood. In 1892 it was visited by another Englishman, Captain Galloway. He found that its former wealth and greatness had departed. The general abolition of the slave traffic had destroyed its prosperity and the king had closed the gates of the city to all Europeans, prohibiting all intercourse between them and his people.

In 1896 an unarmed and friendly expedition approached Benin city against the orders of the king, and contrary to the advice of the neighboring chiefs. Disregarding all warnings of danger and with no preparations for defence, the two hundred and fifty members of the expedition marched right into an ambushade prepared for them in the forest. Only two men escaped to tell the tale in the British settlements on the coast.

Five weeks later an English military expedition entered Benin to punish the offense. The city was found to be wet with human



FIG. 40.—Bronze portrait. The pupils of the eyes are inlaid with iron.

blood from the sacrifices that had been offered according to the religious rites and customs.

In the king's compound and in the blood-encrusted temples were found a large number of curious works of art in bronze and in ivory. The natives could give no information about these objects, which still remain something of an ethnological enigma. Some of them were encrusted with blood, having served in connection with human sacrifices. These antiquities were carried away by the members of the expedition. A large collection went to the Museum in Berlin, and an excellent series was secured by the British Museum. The collection now in the University Museum was procured in London from former members of the expedition that captured Benin.

These curious bronze relics represent a phase of art and a body of artistic products of which we have no actual history. In many ways it is an advanced art, for the modelling is often admirable and the casting of complicated figures on plaques shows an unusual amount of skill and knowledge of metallurgy.

The carved elephant tusks were set up in the Juju houses or



FIG. 41.—Small bronze plaques and masks.

temples, especially in those that stood near the king's compound. They stood in rows on the altars and were apparently objects of veneration. Sometimes they were supported upon bronze heads like the one shown in Fig. 39, or like that shown in Fig. 40, said to be portraits.

The Benin bronzes represent the highest level the art of casting

has ever attained: according to von Lushan neither Benvenuto Cellini, nor anybody else could have done finer work. All the specimens in this Museum have been produced by the process known as "cire perdue," which is the following: A wax model, representing



FIG. 42.—Large bronze plaque representing a high official surrounded by his attendants and slaves.

exactly the object to be produced is shaped: if the object is, however, not a flat one, a clay core has to be used and it is on this that the wax model is formed. This core is not used to avoid waste of metal, as it may seem at first, but to assure even thickness throughout the

object and consequently simultaneous cooling, without which distortions and cracks would be inevitable. The fixing of this clay core is one of the greatest difficulties of the process.

The finished wax model is covered with a very fine-grained paste, and then the whole is allowed to dry slowly, holes being made in the covering clay for the escape of the molten wax and the air. One hole serves to pour in the metal. The dry model is carefully heated until all the wax is molten and then filled with metal. The difficulties



FIG. 43.—Pair of bronze cocks, about life size. The feathers are chiseled, the eyes inlaid with iron.

the casting itself offers are enormous. Few perfect specimens are obtained, the imperfect ones being molten down. When the outer mould is removed (broken) the casts, even those which may be called perfect, are far from being finished. A considerable number of irregularities have to be filed away and supplementary fine details have to be chiseled; the patterns on the background have to be "punched" in.

The process of "cire perdue" was known in Europe in prehistoric times and most authorities assume that it must have been brought

the art were not animals and found along the which can have only way, as those of Benin, from having the high latter. The Museum has a small cast metal head, com- very center of Africa. How- pointing to European influence, bronze plaques of Benin sometimes Europeans dressed and armed accord- fashion of the sixteenth and seven- centuries, cannot be disregarded.

The ivory carvings are purely Af- They are usually covered with carved fig- important personages together with bands ventional form or designs representing bas- work. In the museum collection there are carved tusks; one is six feet in length and carved over the entire surface. Such carved tusks are said to have been placed upright on the altars and supported by bronze heads, such as those illustrated in these pages. The other tusks in the collection are smaller and carved only at intervals with conventional designs.

The collection contains in all 118 pieces, which represent in a very satisfactory way the entire field of Benin art. It furnishes a rare lot of examples for the study of some of the earlier forms of artistic expression and the history of sculpture. Great Benin will be remembered by its artistic productions long after the story of its horrors are forgotten.

to the Guinea coast by the Portuguese. It must, however, not be forgotten that of casting existed in parts which visited by the Portuguese. Small other objects cast in bronze are Gold Coast and Ashanti and been produced in a similar although they are far workmanship of the recently acquired ing from the ever, the fact, that the represent ing to the tenth

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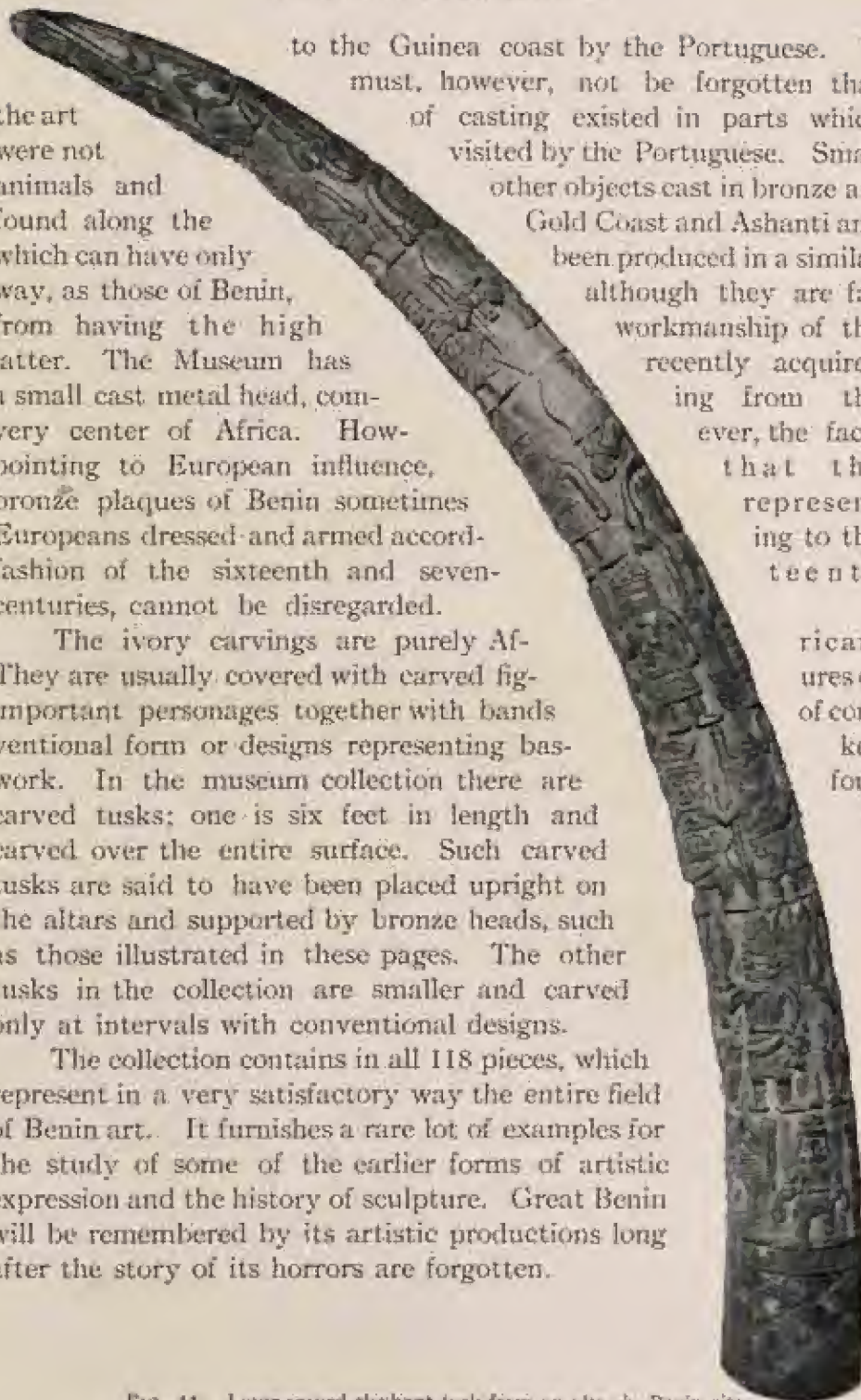


FIG. 43.—Large carved elephant tusk from an altar in Benin city.

The following is a complete list of the lectures given in the public course at the Museum during the season 1912-13:

- November 23.—Dr. Edith H. Hall, "Crete before the Days of Homer."
 November 30.—Mr. Lawrence Binyon, Keeper of Prints in the British Museum "What is Art?"
 December 7.—Dr. Arthur Stoddard Cooley, "Delphi and Olympia."
 December 14.—Dr. Morris Jastrow, of the University of Pennsylvania, "Impressions of the Orient: Cairo, Jerusalem, Damascus."
 December 21.—Miss M. A. Lamb, "The Needlework of Antiquity."
 January 4.—Dr. Charles Upson Clark, of Yale University, "Iberian Art; the Romans in Spain."
 January 11.—Mr. Rustom Rustomjee, of Bombay, India, "The Cities and Temples of India."
 January 18.—Dr. Charles Upson Clark, of Yale University, "Moorish Art in Spain: The Alhambra."
 January 25.—Dr. Robert Pierpont Blake, of the University of Pennsylvania, "Santa Sophia and Byzantine Art in Constantinople."
 February 1.—Mrs. James H. Brewster, "The Children of the Sun."
 February 8.—Mr. E. Torday, Chief of the British Museum Expedition on the Congo, "In Pursuit of an African King."
 February 15.—Dr. Walton Brooks McDaniel, of the University of Pennsylvania, "Travels in Etruria."
 March 1.—Dr. W. Max Müller, of the University of Pennsylvania, "The Jewellery of the Ancient Egyptians."
 March 8.—Dr. Carl Bezold, of Heidelberg University, "Architecture in the Ancient Orient."
 March 15.—Mr. E. Torday, Chief of the British Museum Expedition on the Congo, "Bushongo, a Recently Discovered African Kingdom."
 March 22.—Mr. Frederick Morsen, F.R.G.S., "My Friends the Indians."
 March 29.—Dr. Clifford H. Moore, of Harvard University, "The Religion of Mithras."
 April 5.—Dr. Walton Brooks McDaniel, of the University of Pennsylvania, "The Ancient Etruscans and Their Works."

During the year 1912 the following were elected to the several grades of membership in the Museum: *Fellow for Life*—Eckley B. Coxe, Jr. *Fellowship Members*—John C. Bell, Henry H. Bonnell, John W. Brock, Hampton L. Carson, Walton Clark, Henry H. Collins, John H. Dingee, Joseph I. Doran, Atlee Douredoure, Rodman E. Griscom, Alfred C. Harrison, Charles C. Harrison, William E. Helme, Walter E. Hering, Mrs. Gustav Heye, Joseph Y. Jeanes, John Story Jenks, Simon I. Koln, Thomas L. Latta, Charles M. Lea, Lewis Lillie, John D. McIlhenny, J. Hector McNeal, Louis C. Madeira, Clement B. Newbold, George W. Norris, J. Rodman Paul, Arthur Peterson, R. F. Pomeroy, William M. Potts, Samuel Rea, A. W. Sheaffer, Henry Sheaffer, John B. Stetson, Jr., William Jay Turner, Joseph R. Wainwright, Ellis D. Williams. *Sustaining Members*—William S. Ashbrook, R. Dale Benson, James B. Bonner, John Cadwalader, Mrs. John Cadwalader, Miss Sophia Cadwalader, Free Library of Philadelphia, Thomas S. Gates, Miss Mary K. Gibson, George Leib Harrison, Jr., Louis R. Lemoine, Francis S. McIlhenny, Charles L. McKeethan, Miss Eliza Otto, George Brinton Phillips, Owen J. Roberts, Joseph G. Rosengarten, Edward K. Rowland, Mrs. Edward K. Rowland, Miss Mary McClelland Sinex, 2d, Emily L. Stewardson, John J. Sullivan. *Annual Members*—Cyrus Adler, William W. Arnett, Sherman E. Ayars, Henry G. Brengle, Mrs. Arthur A. Burt, R. Folger Wescott Conquest, Mrs. Henry B. Coxe, S. Horace Disston, Henry H. Donaldson, Miss Kate S. Gillespie, James M. Hibbs, Miss Emily A. Hochstrasser, Mrs. John Frederick Lewis, Mrs. Charles Lukens, Rev. H. E. Meyer, Miss Ella Parsons, William Lyttleton Savage, Mrs. William Lyttleton Savage, Dr. Francis W. Sinkler, Whar-ton Sinkler.

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